United States Court of Appeals

for the Second Circuit

APPENDIX

ORIGINAL

74-2315
75-7106

In The

United States Court of Appeals

For The Second Circuit

B

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP.,

P/S

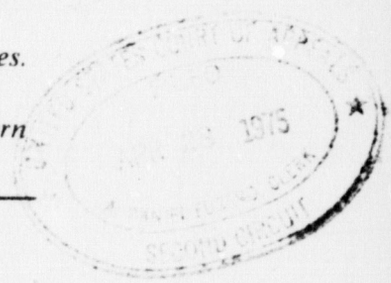
Appellant,

- against -

CERAMCO, INC., a corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, and NORMAN LEVINE,

Appellees.

On Appeal from the United States District Court for the Eastern District of New York



JOINT APPENDIX

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DOCKET ENTRIES JA1

74 [illegible] JONES etc. - vs. - CERAMCO, INC. et al

DATE	PROCEEDINGS	AMOUNT REPORTED IN EMOLUMENT RETURNS	
3-22-74	Complaint filed. Summonsissued.	1	JS5
/26/74	Notice filed that defts have retained counsel .	2	
/26/74	Summons retd and filed. Executed.	3	
5-2-74	By BARTELS, J - order dtd 5-2-74 extending time to answer the complaint to 6-20-74 filed.	4	
[illegible]			
5-29-74	Notice of motion for an order to dismiss ret. on date which Judge will set filed.	6	
6/28/74	Before PLATT,J.- Case called- Motion argued-Decision reserved- Pltff to submit papers within 1 week		
/24/74	Pltff's Brief in Opposition to Deft's motion to dismiss filed.	7	
7-25-74	By PLATT, J.- Memorandum & order dtd. 7-24-74 granting defts' motion to dismiss second claim of complaint etc. filed. Copies to parties	8	
8-28-74	By PLATT, J.- Order dtd 8-27-74 that defts' motion to dismiss first cause of action is denied & defts' motion to dismiss the second cause of action is granted filed.(p/c mailed to attsy).	9	
9-27-74	Notice of appeal filed. Duplicate mailed to C of A & defts. jn	10	
0-4-74	ANSWER filed.	11	
0/11/74	By PLATT,J. Order dated Oct 8, 1974 filed that the time for the defts to answer the pltff's first interrogatories is extended to Nov 11 1974	12	
10-15-74	Before PLATT, J.-Case called. No opposition submitted. Decision reserved.		
10-25-74	Before PLATT, J.-Case called and adjourned to 11-22-74 at 10AM.		
11-13-74	By PLATT, J.-Order dated 11-8-74 extending time for deft to answer pltff's first interrogatories to 30 days filed.	13	
11-13-74	By PLATT, J.-Order dated 11-8-74 rescheduling hearing set for 11-22-74 at 10 AM to 12-6-74 at 10AM filed.	14	
/14/74	Notice of Motion, ret. 12/6/74 filed re: for reconsideration of court's denial of defts prior motion to dismiss the first cause of action	15	
/14/74	Brief in Support of defts motion for reconsideration of Court's Denial of deft's prior motion to dismiss the first cmuse of action filed.	16	
/22/74	Before PLATT,J.- Case called- Marked off		
-6-74	Before PLATT, J.-Case called. Motion for reconsideration of courts denial of defts motion to dismiss argued. Decision reserved.		

74C-467 JONES vs. CERAMCO., INC., et al
CIVIL DOCKET

DATE	PROCEEDINGS	CLERK'S FEES PLAINTIFF	CLERK'S FEES DEFENDANT	AMT RECOVERED IMOLL RET
1-9-75	By PLATT, J. - Memorandum and order dtd 1-7-75 granting defts' motion to dismiss complaint filed.			17
1-10-75	JUDGMENT dated Jan. 10, 1975 dismissing the complaint filed.			18
1/30/75	Defts Memorandum and Affidavit in Opposition to Pltff's Notice of Motion under Rule 59(e) filed.			19
1-31-75	Before PLATT, J. - Case called. Motion for reargument argued. Motion denied from the bench.			
2/5/75	Notice of Appeal filed. Duplicate of Notice of Appeal and docket entries mailed to the C. of A.			20
3-14-75	Affidavit in opposition to defts' motion to dismiss with Supreme Court Order annexed. Document should be with document #7.			21
3-14-75	Brief in opposition to defts' motion for reconsideration of Court's denial of defts' motion to dismiss with affidavits of Peter L. Berger and John Weber annexed filed.			22
3-14-75	Notice of motion ret 1-31-75 under Rule 59(e) filed with memorandum in support and affidavit of Eugene M. Berezin annexed.			23
3-14-75	Inventors Oath re patent in suit filed.			24
3-14-75	Letter dtd 3-12-75 to Peter L. Berger from John C. Vassil filed.			25

D. C. 110

COMPLAINT FILED MARCH 22, 1974 JA3

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP.,	"	
Plaintiff,	"	
vs.	"	Civil Action No.
CERAMCO, INC., a corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, and NORMAN LEVINE	"	
Defendants.	"	

COMPLAINT

JURISDICTION

1. This is a civil action for patent infringement and unfair competition, of which this Court has jurisdiction and venue under the provisions of Title 28, United States Code, Sections 1338 and 1400. The action arises, in part, under the patent laws of the United States and is brought pursuant to Title 35, United States Code, Sections 271 and 281, for infringement of United States Letters Patent No. 3,052,982, entitled "FUSED PORCELAIN-TO-METAL TEETH", M. Weinstein et al, Inventors, issued September 11, 1962.

PARTIES

2. Plaintiff Brian S. Jones, of 26 Court Street, Brooklyn, New York 11201, is a duly appointed court receiver by way of an Order of the Supreme Court of the State of New York on April 1, 1963, for Permadent Products Corp. (hereinafter "Permadent"), a corporation of the State of Delaware.

3. Ceramco, Inc. (hereinafter "Ceramco") is, upon information and belief, a corporation having its principal place of business at 31-16 Hunters Point Avenue, Long Island City, New York 11101. Ceramco is in the business of, among other activities, the manufacture, sale and distribution of certain materials for use in the making of fused porcelain-to-metal teeth.

4. H. Gordon Pelton, upon information and belief, is presently President of Ceramco, is a stockholder in Ceramco, was a founder of Ceramco and has been an active participant with Ceramco since its inception.

5. Irving Klaus, upon information and belief, is a Vice-President of Ceramco, was an original founder of Ceramco, is and was a stockholder in Ceramco, and has been active in the business of Ceramco since its inception.

6. John H. Leatherman, upon information and belief, is Secretary of Ceramco, was an original founder of Ceramco, is and was a stockholder in Ceramco, and has been active in the business of Ceramco since its inception.

7. Norman Levine, upon information and belief, is Treasurer of Ceramco, was an original founder of Ceramco, is and was a stockholder in Ceramco, and has been active in the business of Ceramco since its inception.

8. The business address of Pelton, Klaus, Leatherman and Levine is 31-16 Hunters Point Avenue, Long Island City, New York 11101.

9. Ceramco makes, uses and sells materials used for making fused porcelain-to-metal teeth in violation of the rights granted under said patent 3,052,982. The materials manufactured, sold and distributed by Ceramco are specifically for use by assemblers, such as porcelain laboratories, in the making of fused porcelain-to-metal teeth. The acts of patent infringement, industrial piracy and unfair trade practices herein complained of have taken place and are taking place within the Eastern District of New York.

FIRST CAUSE OF ACTION

Plaintiff repeats and alleges paragraphs 1 to 9 herein.

10. United States Letters Patent No. 3,052,982 entitled "FUSED PORCELAIN-TO-METAL TEETH" was duly and legally issued to M. Weinstein et al on September 11, 1962, on an application filed October 15, 1959, by M. Weinstein et al. Plaintiff, Brian S. Jones, as receiver for Permadent is the sold owner of said patent by an assignment from Permadent dated June 14, 1971.

11. Upon information and belief, defendants jointly and severally have contributorially infringed and are contributorially infringing one or more claims of plaintiff's patent, 3,052,982, by the manufacture, sale and distribution of materials whose primary purpose is in the assembly of fused porcelain-to-metal teeth as set forth in the patent-in-suit. These acts of contributory infringement are taking place and have taken place in this judicial district as well as elsewhere in the United States of America.

12. Plaintiff has suffered damage by reason of defendants infringement of the aforesaid United States Letters Patent and will suffer additional irreparable damage unless defendants are enjoined by this Court from continuing to infringe said patent.

13. Upon information and belief, defendants have prior knowledge and notice of the patent-in-suit.

SECOND CAUSE OF ACTION

Plaintiff repeats and alleges paragraphs 1 to 9 herein.

14. Permadent was responsible for the first practicable, usable and commercial fused porcelain-to-metal replacement tooth, technically known as a crown or pontic or a combination of these known as bridge work. In the course of solving the long felt need of the industry for an artificial tooth having the combined characteristics of metal and porcelain without the previously found deficiencies such as cracking and the like, plaintiff's predecessor in interest developed porcelain-to-metal teeth, which when assembled together provided the unusual and distinctive advantages exclusively found therein. Additionally, in the course of the work leading up to the successful fused porcelain-to-metal tooth construction, Permadent invested significant funds, energy and time in the development thereof and in the introduction and obtaining of acceptance of the same in the marketplace. Much of this information is considered confidential information and was kept secret and retained as proprietary information.

15. Upon the introduction of the Permadent fused porcelain-to-metal tooth construction, the marketplace quickly responded to the improvements and unique features thereof, and this construction has found widespread acceptance in the

dental field, is commonly used therein, and generally replaced prior constructions which did not possess the unique advantages and features of the Permadent construction.

16. During the original investigation work into the new Permadent tooth construction, the following men were employed by Permadent in the respective positions as indicated below:

a. H. Gordon Pelton, presently President of Ceramco, was the sales manager for Permadent for a period of four years in the dental field and prior to his association with Permadent and employment thereby, had no experience in the field. As sales manager, Mr. Pelton, was employed by Permadent from approximately 1955 to 1959. As sales Manager, Mr. Pelton was intimately familiar with the customers of Permadent, the sales and product information of Permadent, other confidential and proprietary information and know-how relating to the successful sales of the new Permadent articles and materials including Permadent's sources of raw materials.

b. Irving Klaus, upon information and belief, a Vice President of Ceramco, was employed by Permadent in 1954 and was employed for a period

of approximately five years as a ceramic engineer in charge of the porcelain manufacturing. Mr. Klaus had no prior experience in the dental field prior to joining Permadent and worked under a Mr. Sigmund Katz, chief engineer, and learned the intimate details surrounding the Permadent tooth construction while in such employment. In the process of learning the details surrounding the Permadent tooth construction, Mr. Klaus became intimately familiar with confidential information, trade secrets and know-how related thereto.

c. John H. Leatherman, upon information and belief, is Secretary of Ceramco, and as his first job in the dental ceramic field was employed by Permadent as an apprentice ceramist. Mr. Leatherman was employed approximately from 1954 and remained in that position for approximately five years and among other responsibilities was in charge of the coloring of the porcelain and became intimately familiar with the novel techniques, secrets, processes and know-how employed by Permadent through the aforementioned Mr. Sigmund Katz and Mr. Irving Klaus.

d. Norman Levine, upon information and belief, is Treasurer of Ceramco, was employed for at least two years from the period of 1957 through 1959 as the accountant for Permadent, and was in charge of the accounting department. In such position, Mr. Levine had complete access to all customer files and purchasing information and other proprietary and confidential information which was the property of Permadent.

17. Defendants Pelton, Klaus, Leatherman, and Levine have jointly and individually wrongfully appropriated materials of Permadent and knowingly misrepresented and used said materials as their own in commencing the artificial tooth activities, all to the detriment of plaintiff.

18. In April, 1959, Pelton, Klaus, Leatherman, and Levine left Permadent and founded Ceramco which then directly competed with Permadent by manufacturing, selling, and distributing the same materials as used in the Permadent tooth construction. Upon information and belief, these same parties conspired with each other while in the employ of Permadent, prior to their leaving Permadent, to commit the enumerated acts of industrial piracy all in an attempt to reap the benefits attributable to the significantly improved Permadent tooth construction. Shortly after these

key employees left Permadent, Permadent's sales and business operations substantially diminished and, to this day, Permadent has not recovered from the damage incurred as a result of the acts conducted by the parties Pelton, Klaus, Leatherman, Levine, Cohen and others. It should be noted that Permadent is a dormant corporation today while, upon information and belief, Ceramco was profitable for many years and recently was sold to Johnson & Johnson Corporation for at least ten million dollars ($10,000,000) in cash. The business of Ceramco was founded and grew upon the heinous acts of the defendants herein.

19. Upon information and belief, the parties, Pelton, Klaus, Leatherman, and Levine conspired after they left Permadent to injure and damage the business of Permadent by maliciously interfering with prior business relationships established by Permadent with regard to its novel and unique dental tooth construction. As such, upon information and belief, these parties conspired to destroy the business of Permadent, which they succeeded in doing.

20. Upon information and belief, these defendants wrongfully appropriated trade secrets of Permadent such as formulas for various compositions and shades or colors of Porcelain.

21. Upon information and belief, these defendants removed information from Permadent and brought it to Ceramco with regard to the manufacture and production of the Permadent tooth construction, which information was the exclusive property of the Permadent Products Corp.

22. Upon information and belief, these defendants did remove wrongfully and convert various other documents or the contents thereof and other materials of Permadent including customer lists, and trade account lists of customers purchasing materials used in the assembly of the Permadent tooth construction, which materials were used to pirate away Permadent customers.

23. Upon information and belief, these same defendants did wrongfully convert and remove documents or the contents thereof and other materials relating to the suppliers and manufacturers of raw materials used in the manufacture of materials by Permadent in the Permadent tooth construction for resale to others as they assembled this unique fused porcelain-to-metal tooth.

24. Upon information and belief, these defendants have and had knowingly misrepresented and used the materials taken from Permadent as their own in commencing their activities in the competing artificial dental tooth construction field, to the detriment of plaintiff.

25. As a result of the activities of Ceramco and the above-named parties, Permadent was forced to file a Chapter 11 Petition in the United States District Court for the Southern District of New York, and thereafter ceased to be an active manufacturer, seller and distributor of the materials used in the assembly of the Permadent artificial tooth construction.

26. Upon information and belief, defendants have abridged and did abridge contractual and fiduciary obligations owed to Permadent.

27. Upon information and belief, defendants appropriated inventions of Permadent and treated them as their own to the detriment of Permadent.

28. Defendants have, in addition to the above acts, maliciously and knowingly performed additional acts of unfair competition and industrial piracy.

29. Defendants have been unjustly enriched by reason of their unconscionable malfeasance all to the detriment of Permadent.

RELIEF REQUESTED

WHEREFORE, Plaintiff prays:

A. That this Court issue an injunction restraining defendants, its officers, servants, agents and employees and

all other persons in privity therewith from infringing United States Letters Patent No. 3,052,982;

B. That this Court issue an injunction restraining and enjoining defendants from continuing to divulge to others and otherwise employ trade secrets of Permadent;

C. That this Court issue an injunction restraining and enjoining defendants from employing and continuing to employ in any manner whatsoever any of the property which defendants wrongfully appropriated from Permadent;

D. That this Court issue an injunction restraining and enjoining defendants from continuing to manufacture any materials used in the construction of an artificial tooth resembling that of Permadent;

E. That an accounting to the plaintiff for damages resulting to the plaintiff from defendants' infringement of said patent 3,052,982, and an accounting for any profits obtained by the defendants wrongful use of the above information, be made;

F. That this Court find that the defendants, Pelton, Klaus, Leatherman, and Levine did conspire to damage and destroy the business of Permadent to their own individual profit and that these parties Pelton, Klaus, Leatherman, Levine and Cohen, be held to be constructive trustees for Permadent

and that the business of Ceramco, set up with the assets acquired from Permadent, be held by the constructive trustees in trust for the plaintiff;

G. That a judgment be entered against defendants jointly and severally for compensatory and punitive damages together with interest including those profits realized from the sale of Ceramco to Johnson & Johnson;

H. That the plaintiff be awarded litigation costs, expenses and attorneys' fees;

I. Any other relief which the Court may deem necessary, proper and just.

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MOTION TO DISMISS FILED MAY 29, 1974 JA16

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

BRIAN S. JONES, as Receiver
for PERMADENT PRODUCTS CORP.,

Plaintiff,

v.

Civil Action No. 74 C 467

CERAMCO, INC., a Corporation
of the State of New York; H. GORDON
PELTON, IRVING KLAUS, JOHN H.
LEATHERMAN, NORMAN LEVINE
and LEON L. COHEN,

Before Judge Platt

Defendants.

/

MOTION TO DISMISS

Now come defendants and move this Court to dismiss with prejudice the Complaint filed herein.

The grounds for this motion are as follows:

(a) With respect to the first cause of action (which is for infringement of U. S. Patent No. 3,052,982 which issued on September 11, 1962) because plaintiff has waited over eleven and one-half years to sue defendants for infringement of said patent in spite of knowledge of defendants' accused acts thus leading defendants to believe that plaintiff would not attempt to sue them for infringement of said patent and defendants have changed their course of conduct and expanded their business. Thus under the doctrine of estoppel and laches plaintiff's first cause of action should be dismissed.

EXHIBITS ANNEXED TO FOREGOING MOTION

(b) With respect to the second cause of action which alleges that the five individual defendants who were former employees of plaintiff left the employ of plaintiff in April, 1959, and breached their confidential relationship with plaintiff and wrongfully took plaintiff's trade secrets and used them to establish the corporate defendant, Ceramco, Inc., which used such secrets to the detriment of plaintiff, the statute of limitations has run out (See New York Statute CPLR 201 - 218) and the cause of action should be dismissed.

(c) With respect to said second cause of action under the doctrine of equitable estoppel and laches said cause of action should be dismissed.

(d) Plaintiff has no trade secrets because the alleged trade secrets have been publicly disclosed in said U. S. Patent No. 3,052,982 which issued and was published on September 11, 1962.

Defendants' brief in support of its motion is attached hereto.

Respectfully submitted,

MORGAN, FINNEGAN, DURHAM & PINE

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Sept. 11, 1962 M. WEINSTEIN ETAL 3,052,982

FUSED PORCELAIN-TO-METAL TEETH

Filed Oct. 15, 1959

FIG. 1.

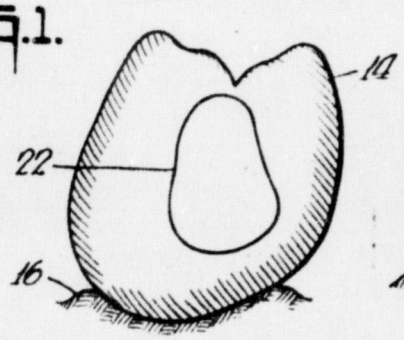


FIG. 2.

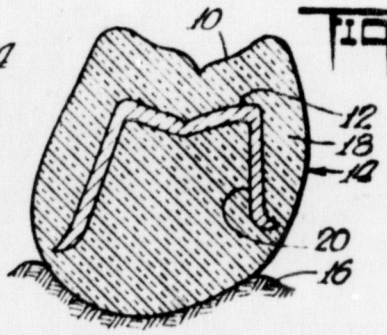


FIG. 3.

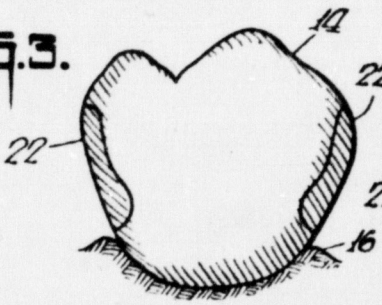


FIG. 4.

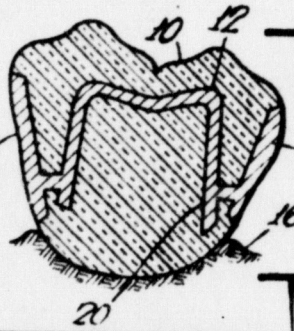


FIG. 5.

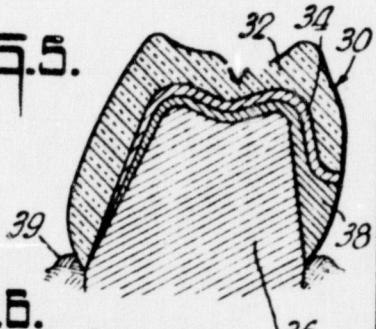


FIG. 8.

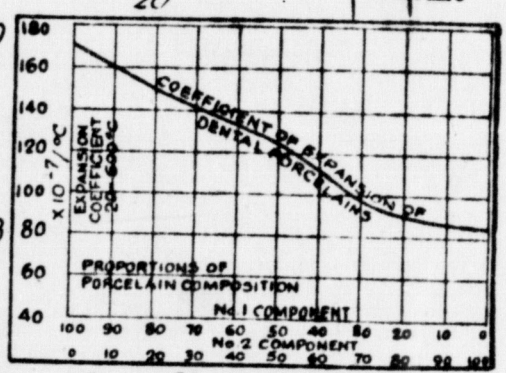
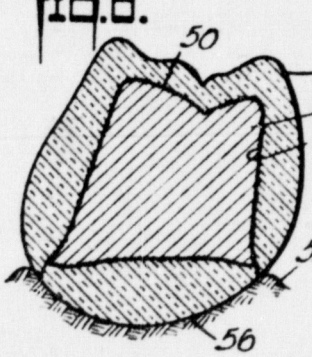


FIG. 6.



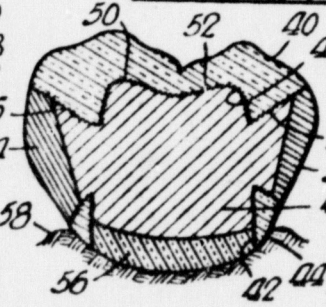


FIG. 7.

Inventors,
MORRIS WEINSTEIN, DECEASED
BY LENORE K. WEINSTEIN, ADMRX.
SIGMUND KATZ
ABRAHAM B. WEINSTEIN
BY Lawrence Rubens
ATTORNEY

United States Patent Office 3,052,982 Patented Sept. 11, 1962

JA19

3,052,982

FUSED PORCELAIN-TO-METAL TEETH

Morris Weinstein, deceased, late of Stamford, Conn., by Lenore K. Weinstein, administratrix, 23 Ralsey Road S., Stamford, Conn., Sigmund Katz, 24 Coolidge Ave., West Orange, N.J., and Abraham B. Weinstein, 23 Ralsey Road S., Stamford, Conn.

Filed Oct. 1[illegible]59, Ser. No. 846,753
26 Claims. (Cl. 32—8)

Our invention relates to an artificial tooth structure of the type wherein a metal substrate is secured to a porcelain coverine, which composite structure is used to cap existing teeth or replace missing teeth.

Dental porcelains may generally be classified as high and low fusing porcelains. The high fusing porcelains fuse above 1800° F. The ideal porcelains are the high fusing porcelains which have been found to be more resistant to thermal and mechanical shock and to erosion by mouth fluids. At present the only known high fusing dental porcelains have a coefficient of expansion up to their annealing range of about $75\times10^{-7/°C.}$ These have been fused to metals having the nearest coefficient of expansion, namely, the iridio-platinum alloys, which have expansion coefficients of about $100\times10^{-7/°C.}$ up to the annealing temperature of the porcelain. The thermal expansion coefficients of the platinum alloys and the prior high fusing dental porcelains are sufficiently divergent so that when fused to an unyielding metallic substrate, the porcelain covering is placed in a high state of stress. Little additional stress is needed in service to initiate fracture in the porcelain.

The lower fusing porcelains (below 1800° to 1650° F.) are less desirable but are useful for additions, repairs or changes to high fusing porcelains and for fusing to low fusing substrates such as gold alloys. Hitherto lower fusing porcelains have also been unsuccessful when fused to gold alloys because of the disparity in expansion coefficients. In addition the lower fusing porcelains contained borax which resulted in excessive solubility and poor color properties.

There are additional shortcomings in the use of the prior materials. It is difficult to grind through the porcelain to the metal substrate without chipping and fracturing the thinned-out porcelain most nearly adjacent to the metal. This is due to the high state of stress at the porcelain-metal interface which the porcelain becomes progressively less able to endure as it becomes thinner.

A further limitation is that prior porcelains are not optically suitable for covering the metal substrate because they cannot compensate for adverse optical qualities introduced into the semi-translucent body by the proximity of the metal substrate.

The other dental metals, such as palladium, gold, and the base metals, possess expansion coefficients which are considerably higher than the iridio-platinum alloys, and accordingly have an even greater disparity between the coefficients of expansion of the metal and the existing high fusing dental porcelains, resulting in greater stresses in the porcelain.

As a consequence, the dental profession has limited the use of porcelain to an esthetic role mainly in the anterior teeth, and has relied entirely on gold crowns and bridgework for the rest of the mouth, for whatever strength was required.

While the shortcomings enumerated above have been prohibitive to the practice of this technique of dental prosthetics, its potential for the advancement of dentistry has been sufficiently great to require the removal of these limitations. Authorities agree that full coverage of a tooth which has been treated for decay or is susceptible to decay or is to be saved from immediate

or later extraction, is the only mechanical guarantee against secondary decay and ultimate extraction. It is a basic requirement in the practice of full mouth rehabilitation. It is also one of the few effective remedies in cases of rampant caries.

The value of the technique of applying porcelain to a metal substrate can be appreciated from the following:

(*a*) No metal need show in the oral cavity, as it may be entirely covered with porcelain to yield a natural restoration in appearance.

(*b*) The restoration is far more resistant to wear than the prior plastic and metal restoration.

(*c*) The color permanency and dimensional stability of the porcelain restoration far exceed that of the prior plastic and metal restoration.

Our invention enables the spread of the most reliable dentistry to the largest numbers of patients previously unable to avail themselves of lasting full coverage in porcelain due to cost, thereby stimulating the skills and interest of the profession where formerly it was often felt futile to propose such treatment. Extensive corrections of the bite to balanced occlusion for the treatment of periodontoclasia will be more readily undertaken. It enables and encourages the use of fixed bridgework instead of removable bridgework, thus avoiding many causes of periodontoclasia and providing a chewing surface closer in natural function, not only in appearance, to that of natural teeth. Where required, it may also be employed in making removable restorations.

Metals having a successful history in dental prosthetics are noble, such as gold, silver, platinum, etc., and the passive base metals, such as austenitic stainless steel, the high cobalt chrome alloys, etc. The base metals oxidize strongly at the porcelain fusion temperatures (1650° to 2400° F.). The oxides are non-adherent, and in addition the metals such as cobalt, chromium and nickel, have oxides which are very strong chromophores and discolor the porcelain. Many of the remaining noble metals, such as some of the gold and silver alloys have melting points well below the fusing range of high fusing porcelains. Therefore, these porcelains cannot be fused without melting these metals.

Among the objects of our invention, therefore, is to provide methods of utilizing noble and passive metals as a support for a porcelain covering even though the fusion temperature of the metal is lower than that of the porcelain, and to provide a method of preventing non-adhering and discoloring oxides from forming when the porcelain is applied to the base metal.

The physical and optical requirements of dental porcelains are exacting in their demands upon color range, translucency and opacity.

A dental porcelain consists of at least three separate and distinct porcelain bodies. The body porcelain is used to construct the principal bulk of the artificial tooth structure. The translucency porcelain, which fuses to a relatively clear, glass-like material, is used to provide translucency in the incisal tips of the artificial tooth structure. It may also be used to reduce the opacity of the body porcelain. The opaque porcelain is used to mask out the dark metal substrate. Its use is essential where the body porcelain is thin and in general is beneficial to the over-all color esthetics of the porcelain reconstruction. A means must therefore be provided to adjust these three separate and distinct porcelains of varying optical requirements to provide substantially identical expansion coefficients, and accordingly, the provision of such means constitutes another object of our invention.

These objects are attained, and others accomplished, as will be apparent from the products and methods described in the following specifications, particularly pointed

out in the claims and illustrated in the attached drawings in which:

FIG. 1 is a proximal view of a porcelain covered pontic molar tooth having a metal substrate core, made in accordance with our invention.

FIG. 2 is a bucco-lingual cross-section of the same.

FIG. 3 is a lingual view of the same.

FIG. 4 is a mesio-distal cross-section of the same.

FIG. 5 is a bucco-lingual cross-section of a jacket construction indicating the use of our technique to cover a prepared natural tooth.

FIG. 6 is a bucco-lingual cross-section of a pontic molar tooth wherein the metal substructure is cast into the porcelain cover.

FIG. 7 is a mesio-distal cross-section of the same with solderable inserts.

FIG. 8 is a chart indicating the proportions of our component materials to be used for obtaining a final porcelain having a preselected expansion coefficient.

We employ in our porcelain, certain basic components, the proportions of which may be calculated to produce a porcelain body with a coefficient of expansion which matches that of the metal of our selection.

The following is one method of manufacturing the components of our high fusing porcelain:

No. 1 Component

Our No. 1 component is made up of a frit, and a high orthoclase feldspar having for example, a theoretical computed composition of 16.17% parts of albite and 83.83% parts of orthoclase having a composition of ingredients about as follows:

	High Orthoclase Spar, percent	Frit, percent
SiO_2	65.6	50
Al_2O_3	18.4	7
Na_2O	2.6	8
K_2O	13.2	20
CaO	0.1	10
MgO	0.1	5
	100.0	100

A mixture of 15% parts by weight of the powdered frit to 85% of the powdered feldspar results in a component by analysis, as follows:

	Percent by weight
SiO_2	63.40
Al_2O_3	16.70
CaO	1.50
MgO	0.80
Na_2O	3.41
K_2O	14.19
	100.00

The mixture is fired for about two hours at 2400° F. (about cone 12), or until the mixture is in a vitreous state. It is thereafter cooled and powdered to approximately 2 to 5% on 200 mesh. Its fusion point is about 2000° F. This is our No. 1 component. If the percentage of powdered frit is decreased, the fusing point of the final porcelain will be increased and the expansion coefficient will be decreased.

No. 2 Component

This consists of a mixture of about 75% of an ordinary clear feldspar and about 25% silica, which has the following composition:

	Percent by weight
SiO_2	73.50
Al_2O_3	14.40
CaO	0.25
MgO	0.10
Na_2O	1.75
K_2O	10.00
	100.00

This mixture is fired for about two hours at 2400° F. (about cone 12), or until the free silica is absorbed, and thereafter cooled and similarly powdered. Its fusion point is about 2300° F. This is our No. 2 component. If the percentage of silica is decreased the fusing point of the final porcelain product will be decreased. For example, if only 15% silica is added in making the No. 2 component, the fusing point will be about 2300° F.

Example No. 1.—High Fusing Porcelain No. 1

A mixture of equal parts of the powdered No. 1 component and the powdered No. 2 component results in the following composition:

	Percent by weight
SiO_2	68.45
Al_2O_3	15.55
CaO	0.90
MgO	0.45
Na_2O	2.55
K_2O	12.10
	100.00

The above represents the analyzed chemical composition of this specific high-fusing, high-expansion porcelain. It has an expansion coefficient of slightly less than $125\times10^{-7/°}$ C. and a fusing range around 2100° F.

This porcelain is suitable for matching without change of expansion properties from biscuit bake through the various degrees of vitrification and glaze, to a palladium metal alloy substrate having a coefficient of expansion of $125\times10^{-7/°}$ C. which has the coefficient composition:

	Percent by weight
Palladium	93.5
Ruthenium	6.5
	100.0

No. 1a Component—Alternative

We have found another method of making our high fusing dental porcelain, as follows: First we fire the high orthoclase spar, for example, one having a theoretical computed composition of 16.17 parts of albite and 83.83 parts of orthoclase for about 2 hours at 2400° F. (about cone 12), or until all the material is in a vitreous state. It is then cooled and powdered as aforesaid. This furnishes an alternative material for Component No. 1 in the method of manufacturing the components of our porcelains.

Between 1 and 5% of potash may be added in the form of potassium carbonate to the high orthoclase spar if an insufficient amount of orthoclase is present. Instead of the potassium carbonate, a powdered fusion product may be added containing about one part by weight of K_2O to about 2½ parts by weight of SiO_2.

The resulting mixture of the alternative Component No. 1a with the original Component No. 2 is suitable for our purposes and in equal amounts yields a porcelain with completely satisfactory optical and mechanical properties, a fusion range of about 2100° F., and an expansion coefficient of slightly less than $125\times10^{-7/°}$C. This is suitable for the palladium alloy of Example 1 and may be used for our purpose.

Example No. 2.—High Fusing Porcelain No. 2

The relationship between the No. 1 component and the No. 2 component is adjusted to provide the increased coefficient expansion over that of Example 1. For this alloy, we may use 90% of our No. 1 component and 10%

of our No. 2 component. The composition of the mixture is as follows:

	Percent by weight
SiO_2	65.42
Al_2O_3	16.24
CaO	1.25
MgO	0.66
Na_2O	3.07
K_2O	13.36
	100.00

The above represents the analyzed chemical composition of this high fusing porcelain having an expansion coefficient slightly below $165\times10^{-7/°}$ C.

This porcelain is suitable for matching to a cobalt chrome alloy substrate having a coefficient of expansion of $165\times10^{-7/°}$ C. which has the following composition.

	Percent by weight
Chromium	27.00
Molybdenum	6.00
Nickel	2.00
Iron	1.00
Carbon	0.25
Manganese	0.60
Silicon	0.60
Cobalt	62.55
	100.00

In the case where cobalt-chrome alloys are used, we achieve a very low cost, high strength dental construction of relatively light weight. However, the process of fusing porcelain to cobalt-chrome alloys necessitates a different technique of fusion. We prefer to make the fusion under high vacuum in order to avoid oxidation because the oxides of cobalt-chrome, nickel, iron, etc. are strong chromophores for porcelain and discolor it. In addition, the oxides are frequently non-adherent and destroy the bond at the porcelain-metal interface. While vacuum firing is one method of avoiding oxidation, other methods are also useful, such as firing in a reducing or neutral atmosphere. In addition, oxidation may be suppressed by a heavy coat of some non-oxidizable metal, such as gold, which may be diffused into the cobalt-chrome alloy by high temperature vacuum firing.

In addition to firing the porcelain to the metal as is shown in FIGS. 2, 4 and 5, the porcelain covering alone may be fired in the desired shape, having suitable openings for casting the molten metal body therein, as is shown in FIG. 7. By this other method, explained in greater detail hereinafter, the oxidation and discoloration may be prevented.

It is understood that other proportions of the Nos. 1 and 2 components will give other expansion coefficients and other fusing ranges within the limits needed for the selected expansion characteristics. A chart illustrating the proportions in terms of expansion coefficients is shown in FIG. 8. Actually the range of proportions varies between 25% of the No. 1 component and 75% of the No. 2 component as the lower coefficient of expansion (about $90\times10^{-7/°}$ C) fusing range about 2400° F. to 100% of the No. 1 component (about $170\times10^{-7/°}$ C) fusing range about 2000° F.

The high fusing dental porcelains of our invention with expansion coefficients between 90 and $170\times10^{-7/°}$ C and fusing ranges between 2400° F. and 2000° F. will have the following approximate range in composition:

	Percent by weight
SiO_2	63.0 to 73.0
Al_2O_3	14.0 to 17.0
CaO	0.5 to 1.5
MgO	0.2 to 0.8
Na_2O	2.0 to 3.5
K_2O	11.0 to 15.0

MEDIUM FUSING PORCELAINS

A medium-fusing porcelain may be manufactured by a similar method.

For example, the No. 1 component previously disclosed may be blended with a No. 3 component, a counterpart to the No. 2 component previously described.

Specifically, the No. 3 component may be made as follows:

	High Orthoclase Spar of No. 1 Component, percent	Frit, percent
SiO_2	65.6	70.00
Al_2O_3	18.4	8.00
Na_2O	2.6	16.70
K_2O	13.2	----
CaO	0.1	5.00
MgO	0.1	3.30
	100.0	100.00

A one-to-one mixture of the above two powdered materials fused at 2200° F. for two hours and powdered, provides our No. 3 component, having the following composition:

No. 3 Component

	Percent by weight
SiO_2	67.80
Al_2O_3	11.70
Na_2O	9.55
K_2O	6.60
CaO	2.55
MgO	1.80
	100.00

This fusion product when powdered will fuse at about 1650° F.

Example No. 3.—Medium Fusing Porcelain No. 1

A medium fusing porcelain may now be obtained by a one-to-one combination of the powdered No. 1 component and the powdered No. 3 component. Such a medium fusing porcelain will have a final composition about as follows:

Medium Fusing Porcelain No. 1

	Percent by weight
SiO_2	65.60
Al_2O_3	14.20
Na_2O	6.47
K_2O	10.40
MgO	1.30
CaO	2.03
	100.00

This medium fusing porcelain fuses at approximately 1725° F. and has a coefficient of expansion of $125\times10^{-7/°}$ C. As such it is suitable for the application cited in Example No. 1.

By varying the ratio between the No. 1 and No. 3 components, other expansion coefficients and fusing ranges may be attained, similar to example No. 2 as follows:

Example No. 4.—Medium Fusing Porcelain No. 2

A mixture of seven parts by weight of No. 1 component and three parts of No. 3 component will have a coefficient of expansion of $140\times10^{-7/°}$ C. and a fusing range of about 1750° F. This is suitable for fusing to an alloy having a composition: Gold 80%, platinum 20%. This alloy has a coefficient of expansion of slightly above $140\times10^{-7/°}$ C., and a fusing temperature of about 2200° F. Formulating a chart, similar to the chart shown in FIG. 8 but limited to combinations of No. 1 and No. 3 components, we find that the coefficients of expansion

vary in substantially the same manner as is illustrated for the No. 1 and No. 2 components, and the fusing ranges are between 2000° F. for about 100% No. 1 component, to 1650° F. for 100° of the No. 3 component, with an expansion coefficient of about $80\times10^{-7/°}$ C.

No. 4 Component—(Alternative No. 1 Component)

An example of the alternative Component No. 1 using 10% of potassium carbonate and 90% of high orthoclase spar has the theoretical composition as follows:

	Percent by weight
SiO_2	61.00
Al_2O_3	17.10
Na_2O	2.37
K_2O	19.31
CaO	0.11
MgO	0.11
	100.00

This may be used in place of Component No. 1 but having a lower fusion temperature of about 1950° F.

We have also found that lithia (Li_2O) may be employed to accomplish results similar to the use of potash. It may be introduced into the spar either as a frit or as lithium carbonate. On a weight for weight basis, lithia is twice as effective as K_2O, and therefore one half the amount of lithia may be used for the amount of potash indicated for obtaining the lower fusing ranges and increasing the thermal expansion.

For example, to a high orthoclase feldspar i.e. 16.17% albite and 83.83% orthoclase, having an oxide composition of about:

	Percent by weight
SiO_2	65.60
Al_2O_3	18.40
Na_2O	2.55
K_2O	13.20
CaO and MgO	0.25
	100.00

is added 5% of Li_2CO_3 (lithium carbonate). This is fired at 2200° F. for two hours or until vitrification results and this gives the following approximate composition, which is our

No. 5 Component—(Alternative No. 1 Component)

	Percent by weight
SiO_2	64.30
Al_2O_3	18.10
Na_2O	2.50
K_2O	12.90
CaO and MgO	.20
Li_2O	2.00
	100.00

No. 5 component has a lower fusion temperature i.e. 1800° F. and a coefficient of expansion of above $170\times10^{-7/°}$ C.

The above Component No. 5 is added 50/50 to our No. 3 component, which gives our alternative medium fusing porcelain with the following composition:

Example No. 5.—Medium Fusing Porcelain No. 3

	Percent by weight
SiO_2	65.7
Al_2O_3	15.0
Na_2O	6.0
K_2O	9.3
CaO and MgO	2.0
Li_2O	2.0
	100.0

This has a coefficient of about $140\times10^{-7/°}$ C. and a fusing temperature of about 1750° F. This is also suitable for fusing to the gold alloy base of Example No. 4.

Lower fusing porcelains having maturing ranges between 1650° F. and 1800° F. may be made by methods similar to procedures previously described. Two new components, designated No. 6 and No. 7 are employed.

The No. 6 component is made by taking 90 parts of the feldspar of the No. 1 component, adding to it 5 parts of the frit employed in the No. 1 component, and 5 parts of lithium carbonate. This mixture is fired for two hours at 2200° F. or until a vitreous state results. It is thereafter ground to pass about 95% through a 200 mesh screen. This No. 6 component has the following composition:

	Percent by weight
SiO_2	63.41
Al_2O_3	17.45
K_2O	13.28
Na_2O	2.84
Li_2O	2.06
CaO	0.61
MgO	0.35
	100.00

This No. 6 component has a thermal expansion of about $170\times10^{-7/°}$ C. and a fusing point of about 1650° F.

The No. 7 component employed in our low fusing porcelain is made by taking 30 parts of the feldspar used to make the No. 1 component, and 70 parts of a common frit having the following composition:

	Percent by weight
SiO_2	70.0
Al_2O_3	5.0
Na_2O	16.5
CaO	5.0
MgO	3.5
	100.0

This mixture of frit and feldspar is fired for two hours at 2200° F. or until a vitreous state results. It is thereafter ground to pass about 95% through a 200 mesh screen.

This No. 7 component has a thermal expansion of about $85\times10^{-7/°}$ C., and a fusing point of about 1800° F. The composition is as follows:

No. 7 Component

	Percent by weight
SiO_2	68.68
Al_2O_3	9.02
K_2O	3.96
Na_2O	12.33
CaO	3.53
MgO	2.48
	100.00

Example No. 6.—Low Fusing Porcelain

A mixture of 6 parts by weight of our No. 6 component and 4 parts by weight of our No. 7 component constitutes a low fusing (1650° F.) porcelain having the following composition:

	Percent by weight
SiO_2	65.518
Al_2O_3	14.078
K_2O	9.552
Na_2O	6.636
Li_2O	1.236
CaO	1.778
MgO	1.202
	100.000

This low fusing porcelain No. 6 has a thermal expansion of about $130\times10^{-7/°C.}$ As such it is suitable for addition to or repair of high or medium fusing porcelain, Examples Nos. 1 and 3.

By varying the ratios between the No. 6 and No. 7 components, other thermal expansion coefficients and fusing ranges may be obtained.

The dental lower fusing porcelains of our invention with expansion characteristics between $80\times10^{-7/°C.}$ and $170\times10^{-7/°C.}$, and having a fusing range between 1650° F. and 1950° F. respectively, will have the following approximate range in composition:

	Percent by weight
SiO_2	61 to 67.8
Al_2O_3	17.1 to 11.7
CaO	0.1 to 2.6
MgO	0.1 to 1.8
Na_2O	2.37 to 9.6
K_2O	19.3 to 6.7

Where the lithia (Li_2O) has been used in the No. 5 and No. 6 components, the amount of lithia should be included in the above constituents and the range is between 0% and 5%.

This will reduce the above components by from 0% to 5% when lithia is used.

From the foregoing, our porcelain composition, having a coefficient of expansion from $80\times10^{-7/°C.}$ to $170\times10^{-7/°C.}$ and a fusing range btween 1650° F.–2400° F., will have the following constituents and range:

	Percent by weight
SiO_2	61.0–73.0
Al_2O_3	11.7–17.1
K_2O	6.7–19.3
Na_2O	2.0–9.6
CaO	0.1–2.6
MgO	0.1–1.8

It is also true here that where lithia (Li_2O) is used in the preparation of our porcelain in the amounts of between 0% and 5%, that the foregoing minimum values will be reduced by 0% to 5% in like percentage.

These dental porcelains may be brought to a glaze without danger of losing the fine contours and carvings that may be used to set up an ideal reproduction. This is possible only when an adequate fusing range exists, i.e. a high viscosity at glazing temperature.

Our porcelains are adjusted to have an expansion coefficient slightly lower than the metal base. By this means the porcelain is placed in compression where it is strongest, rather than in tension, where it is weakest. Small amounts of clay and coloring oxides from 0% to 5% by weight may be added, depending on the opacity and color desired.

The use of base metals which readily oxidize at high fusing temperatures, is possible with our method, for we have found that when the base metals are quickly cast into the high fusing porcelain at the plastic temperature of about 1600° F., the oxidation does not take place in the short period of time that the metal is heated and uncovered, with the result that the porcelain is free from the effects of oxidation and discoloration.

The inside of the porcelain may be suitably roughened, as at 50, in FIG. 7 to provide additional mechanical keys into which the metal will interlock for increased bond strength. Gold filings **52** may be fired into the inner surfaces of the hollow porcelain covering to provide a further interlock between the porcelain and the metal core.

Where base metals are used, we have discovered that we can pre-position sections **54** of gold solder, or a solderable metal, in the mesial and distal faces at the ends of the passageways and cast the base metal into the bore and passageways against the pre-positioned sections. The base metal will fusion weld to the solder sections (which may be in the form of disks) and provide a pontic tooth having a base metal core with exposed precious metal surfaces suitable for connection to adjacent teeth. The opening **42** where the base metal is cast into the tooth is covered with a suitable porcelain plug **56** fused thereto to provide a porcelain contact with the tissue of the mouth at the gum line **58**.

The ceramic teeth of our invention are thus provided with porcelain having the requisite color, range, translucency, opacity, insolubility, mechanical strength, maturing range, fusion range and a matched coefficient of expansion to the metal substrate.

By proper manipulation and processing of the ingredients of the porcelain, it is possible to obtain coefficients of expansion and fusing ranges which will match the coefficient of expansion of the noble and base metals used in the mouth.

For covering existing teeth, preferably the metal substrate should possess an outer surface generally conforming to the outer surface of the dentine structure of the natural tooth. In FIG. 2, there is shown, in cross-section, the occlusal portion **10**, a metal core **12** in a typical molar restoration **14** in position on the gums **16**. Such a restoration may be a pontic as shown in FIGS. 1 to 4, or a crown, such as the molar crown for a natural tooth, as shown in FIG. 5.

In each case the metal core **12** is generally positioned just below the outer surface to provide a reinforcing structure substantially throughout the entire layer of the porcelain covering **18** to support it against failure. By matching the coefficients of expansion of the metal to that of the porcelain, a relatively thin covering of the porcelain may, for the first time, be employed for teeth, which covering is free of tension and excessive compression and therefore will not crack as does present commercial dental porcelain used on similar metal substrates.

In manufacturing a molar pontic **14** as is shown in section, FIG. 2, on the gums **16**, the core **12** may be made hollow as at **20** to reduce the weight of the metal, and therefore the cost, and to provide better retention for the porcelain. The pontic illustrated is provided with wing sections **22** which extend to the surfaces, forming metal contact areas for attachment to metal areas on adjacent supporting teeth.

The molar crown **30** illustrated in FIG. 5 comprises the outer porcelain cover **32** fused to the metal core **34**. In such case the tooth structure **36** is prepared in the slightly tapered form illustrated. A taper of about 5° is satisfactory. The crown **30** is fitted over a wax impression of the tooth, not shown, which is subsequently cast in gold or other suitable metal **38** to closely fit the margins adjacent to the gums **39**. By this means, the stock molar crown now has a perfect fit for the tooth **36** to which it is cemented. Metal foil can be used in place of the wax and fused to the crown. Details of such a construction are shown, described and claimed in a copending application Serial No. 443,872, filed July 16, 1954.

We employ a mold (not shown) for making our teeth, which mold defines the outer configuration of the porcelain tooth we are making in the proper size and shape. Thereafter, we insert the proper size and type of metal core therein and position it with respect to the mold in a manner known to the art of molding. The porcelain contains a binder, such as starch and water, which places the porcelain in condition for molding and for retaining its shape when the forms are removed and the tooth inserted in the baking ovens where the porcelain and metal are fused to each other.

In making high fusing porcelain dental constructions we prefer to fire the teeth for about one half hour at a temperature of 2000° F., or about cone **02**. This is the equivalent of the 2150° F. porcelain fired for a few minutes.

In the manufacture of porcelain coverings into which

metal is cast, as shown in FIGS. 6 and 7, we first bake the porcelain covering 40 in the desired size and shape. The porcelain covering is provided with a hollow bore 42 extending from the saddle area 44, following generally the outline and position of the dentine structure of the tooth. Lateral passageways 46 lead from the central bore to the mesial and distal sides, respectively, of the tooth to provide for connections to adjacent teeth. The metal 48 is then cast into the porcelain covering, as will be hereinafter described.

We have discovered that it is possible to cast metal directly into the porcelain, provided the porcelain is in its plastic range, which is around 1600° F. for the high fusing porcelain. In such instance, the hollowed-out tooth covering is handled like a wax pattern for lost wax castings. That is, the hollows are filled with wax, the wax is sprued, invested, the wax burnt out, and metal cast in centrifugally, or otherwise.

Manufacture is very much simpler and cheaper by this method of fabrication. Base metals may be cast into the porcelain without oxidation sufficient to impair the porcelain-to-metal bond. This process also prevents discoloration of the porcelain.

The metal is heated in excess of its melting point, which in the case of the cobalt-chrome alloy, is approximately 2600° F., and casts centrifugally or by other means into the investment containing the hollowed-out tooth covering. The porcelain is first heated to its plastic temperature, say about 1600° F., at which temperature the molten metal is poured into the porcelain covering. At this temperature, the covering is plastic and therefore capable of enduring extreme thermal shock without fracture. It is then slowly cooled to room temperature.

By our process it is possible to prepare dental bridges made of porcelain-covered metal-reinforced teeth that have no metal showing; which have a controlled color, brilliance and hue; of great strength; that are biologically compatible; that are simple in construction; that may be readily soldered; and that are designed to furnish maximum support to the porcelain to minimize breakage.

By our invention, the dental profession can, for the first time, safely rehabilitate the entire mouth, or any part thereof, in porcelain. Thus the patient can receive the full benefits of porcelain, such as superior tissue tolerance, increased wear resistance vital in the treatment of pyorrhea, and improved color and dimensional stability over acrylic restorations now being used.

By the use of teeth empoying our invention, we can correct the bite and balance occlusion in the case of periodontoclasia, so that the delicate and vital equilibration obtained will be best maintained due to the relatively small amount of wear encountered compared to the wear of gold. This is essential to real and lasting success in the treatment, control and prevention of periodontoclasia.

We have thus described our invention, but we desire it understood that it is not confined to the particular forms or uses shown and described, the same being merely illustrative, and that the invention may be carried out in other ways without departing from the spirit of our invention, and, therefore, we claim broadly the right to employ all equivalent instrumentalities coming within the scope of the appended claims, and by means of which objects of our invention are attained and new results accomplished, as it is obvious that the particular embodiments herein shown and described are only some of the many that can be employed to attain those objects and accomplish these results.

We claim:

1. A dental construction comprising a rigid metal body and a porcelain covering, said covering containing high fusing optically translucent material having a coefficient of expansion slightly less than that of the metal body to put the porcelain covering under compression, said material under compression comprising the following constituents and range:

	Percent by weight
SiO_2	63 to 73
Al_2O_3	14 to 17
CaO	0.5 to 1.5
MgO	0.2 to 0.8
Na_2O	2 to 3.5
K_2O	11 to 15

2. The method of preparing a dental construction which consists in baking a hollow porcelain covering in the shape of a tooth having a hollow portion and casting a metal into said hollow portion.

3. The method of claim 2, wherein the porcelain covering is heated to its plastic range when receiving the cast metal.

4. A dental construction comprising a metal base, and a porcelain covering in the shape of a tooth and secured to said metal base, said porcelain having a coefficient of expansion between 90 and $170\times10^{-7/°}$ C and slightly less than that of the metal base to put the porcelain covering under compression, said porcelain covering and metal capable of being fired to above 1800° F. and cooled to room temperature said material under compression comprising the following constituents and range:

	Percent by weight
SiO_2	63 to 73
Al_2O_3	14 to 17
CaO	0.5 to 1.5
MgO	0.2 to 0.8
Na_2O	2 to 3.5
K_2O	11 to 15

5. The dental construction of claim 4, wherein the porcelain comprises a homogeneous mixture of about 7½ parts of a frit consisting of about 50% SiO_2, 7% Al_2O_3, 10% CaO, 5% MgO, 8% Na_2O and 20% K_2O, and about 42½ parts of a powdered natural feldspar having about 80 parts of orthoclase and about 20 parts of albite, with substantially an equal amount of the fusion product of about 75% natural feldspar and about 25% silica.

6. The dental construction of claim 4, wherein the porcelain comprises about 50 parts of a feldspar containing about 80% orthoclase and 20% albite homogeneously mixed with about 50 parts of a fusion product containing about 75% natural feldspar and about 25% silica.

7. The method of preparing a dental construction, which comprises firing a spar containing about 80% orthoclase at a temperature of about 2400° F. until substantially all the material is in a vitreous state, powdering the same, and mixing the powdered spar with a powdered fusion product consisting of between 70 and 95% natural feldspar and between 5 and 30% silica fired to about 2400° F., and securing the mixture to a metal base having a coefficient of expansion between 90 and $170\times10^{-7/°}$ C and slightly more than that of the mixture to put the fused mixture under compression at a fusing temperature of above 1800° F. said material under compression comprising the following constituents and range:

	Percent by weight
SiO_2	63 to 73
Al_2O_3	14 to 17
CaO	0.5 to 1.5
MgO	0.2 to 0.8
Na_2O	2 to 3.5
K_2O	11 to 15

8. The method of claim 7, wherein a small amount of K_2O is added when firing the orthoclase spar.

9. The method of claim 7, wherein a small amount of a powdered fusion product is added containing about one part by weight of K_2O to about 2½ parts by weight of SiO_2.

10. The method of claim 7, wherein about 15 parts

by weight of a powdered frit consisting of about 50% SiO_2, 7% Al_2O_3, 10% CaO, 5% MgO, 8% Na_2O and 20% K_2O is added to about 85 parts by weight of the orthoclase spar.

11. The method of claim 7, wherein the ratio of the two fusion products is adjusted to give a pre-selected coefficient of expansion in the final fused product.

12. The dental construction of claim 1 wherein the mesial and distal surfaces of the porcelain covering contain passageways filled with the metal of the body.

13. The dental construction of claim 1 wherein the mesial and distal surfaces of the porcelain covering contain passageways which have exposed surfaces of solderable metal connected to the metal body.

14. The method of claim 2 wherein metal particles are added to the inner surface of the porcelain covering before the molten metal is cast therein.

15. The method of preparing a dental construction which comprises firing a spar containing not less than 80.0% orthoclase at a temperature not less than 2400° F. until all material is in a glassy state; cooling, and grinding the glassy material until it will pass through a No. 14 silk screen, mixing the ground material with a similarly ground product consisting of between 70.0% and 95.0% orthoclase spar and between 5.0% and 30.0% silica fired at a temperature of about 2400° F. until the silica is sufficiently absorbed to give the desired degree of translucency, applying the resulting mixture to a cleaned metal base containing palladium possessing a coefficient of expansion between 90 and $160\times10^{-7/°C.}$, suitably shaped, and firing the composite structure to temperatures of about 2100° F. sufficient to fuse the porcelain to the metal, and to give the porcelain a coefficient of expansion sufficiently close to that of the metal base to insure a seal and only sufficiently less to free the porcelain covering of tension.

16. The method of converting an ordinary spar consisting of between 70.0% and 90.0% orthoclase into a dental porcelain which comprises adding between 5 and 30% of silica, and firing the mixture until translucent, then cooling and grinding the subsequent frit, thereafter mixing the same with an orthoclase spar containing not less than 80% orthoclase which has been fired to a temperature of not less than 2400° F. until all the material is in a glassy state, and thereafter cooled and ground.

17. A dental construction comprising a metal base containing palladium in amounts sufficient to cause the metal base to possess a coefficient of expansion in excess of 90 and below $160\times10^{-7/°C.}$, and a porcelain covering having the shape of a tooth and fused to the metal base, said porcelain covering having a maturing range of between 1750° F. and 2400° F. and having a coefficient of expansion slightly less than that of the metal base to free the porcelain covering of tension, said metal base being sufficiently large to form a metal substrate immediately below the surface of the porcelain to reinforce the porcelain layer.

18. The method of manufacturing a dental porcelain which comprises adding a powdered fusion product consisting of about 7½ parts of 50% SiO_2, 7% Al_2O_3, 10% CaO, 5% MgO, 8% Na_2O and 20% K_2O and about 42½ parts of a powdered orthoclase feldspar having about 80 parts of orthoclase and about 20 parts of albite to a powdered fusion product of an orthoclase feldspar and silica mixed in the ratio of about three to one, the proportions of the two fusion products forming the dental porcelain when fused, having a coefficient of expansion between 90 and $160^{-7/°C.}$

19. A dental construction comprising a metal base, and a porcelain covering in the shape of a tooth fused to said metal base, having a coefficient of expansion between 90 and $160\times10^{-7/°C.}$ and slightly less than that of the metal to free the porcelain covering of tension said porcelain covering and metal capable of being fired to about 2150° F. and cooled to room temperature.

20. The dental construction of claim 19, wherein the porcelain comprises a homogeneous mixture of about 7½ parts of a frit consisting of about 50% SiO_2, 7% Al_2O_3, 10% CaO, 5% MgO, 8% Na_2O and 20% K_2O, and about 42½ parts of a powdered orthoclase feldspar having about 80 parts of orthoclase and about 20 parts of albite with substantially an equal amount of the fusion product of about 75% natural feldspar and about 25% silica.

21. The dental construction of claim 19, wherein the porcelain comprises about 50 parts of a feldspar containing about 80% orthoclase and 20% albite homogeneously mixed with about 50 parts of a fusion product containing about 75% orthoclase feldspar and about 25% silica.

22. The method of preparing a dental construction, which comprises firing a spar containing about 80% orthoclase at a temperature of about 2400° F. until substantially all the material is in a glassy state, powdering the same, and mixing with a powdered fusion product consisting of between 70 and 95° orthoclase spar and between 5 and 30% silica fired to about 2400° F., and fusing the mixture to a metal base having a coefficient of expansion between 90 and $170\times10^{-7/°C.}$ at a temperature of about 2150° F., the coefficient of expansion of the porcelain being slightly less than that of the metal base.

23. A dental construction comprising a rigid metal body and a porcelain covering, said covering being made of high fusing optically translucent material having a coefficient of expansion slightly less than that of the metal body to put the porcelain covering under compression, said material under compression comprising the following constituents and range:

	Percent by weight
SiO_2	67.8 to 73
Al_2O_3	11.1 to 17.1
CaO	0.1 to 2.6
MgO	0.1 to 1.8
Na_2O	1.9 to 9.6
K_2O	6.3 to 19.3
Li_2O	0 to 5.0

24. The method of preparing a dental construction, which comprises firing a material containing a spar of not less than 80% orthoclase at a temperature of about between 2200° F. and 2400° F. until substantially all the material is in a vitreous state, powdering the same, and mixing with a powdered fusion product consisting of not less than 30% by weight of natural feldspar and a material containing the following constituents and range: SiO_2 (5 to 70% by weight), Al_2O_3 (0 to 5.0%), Na_2O (0 to 16.5%), CaO (0 to 5.0%), and MgO (0 to 3.5%), fired to not less than 2200° F., and securing the mixture to a metal base having a coefficient of expansion between 80 and $170\times10^{-7/°C.}$ and slightly more than that of the mixture to put the fused mixture under compression at a fusing temperature of not less than 1650° F. said material under compression comprising the following constituents and range:

	Percent by weight
SiO_2	57.8 to 73
Al_2O_3	11.1 to 17.1
CaO	0.1 to 2.6
MgO	0.1 to 1.8
Na_2O	1.9 to 9.6
K_2O	6.35 to 19.3
Li_2O	0 to 5.0

25. A dental construction comprising a metal base possessing a coefficient of expansion in excess of 80 and below $170\times10^{-7/°C.}$, and a thin porcelain covering having the shape of a tooth and fused to the metal base, said porcelain covering having a maturing range of between 1650° F. and 2400° F. and having a coefficient of expansion slightly less than that of the metal base to free the porcelain covering of tension, said metal base

being sufficiently large to form a metal substrate immediately below the surface of the porcelain to reinforce the thin porcelain layer.

26. A dental construction comprising a metal base, and a porcelain covering in the shape of a tooth fused to said metal base, having a coefficient of expansion between 80 and $170\times10^{-7/°C.}$ and slightly less than that of the metal to free the porcelain covering of tension said porcelain covering and metal capable of being fired to above 1650° F. and cooled to room temperature.

References Cited in the file of this patent

UNITED STATES PATENTS

1,892,490	Hejcmann	Dec. 27, 1932
2,334,319	Erdle	Nov. 16, 1943

EXHIBIT B - ORDER OF REFEREE IN BANKRUPTCY DISMISSING PROCEEDINGS

ITED STATES DISTRICT COURT
OUTHERN DISTRICT OF NEW YORK

----------x

In Proceedings for an
Arrangement No. 60-B-268

THE MATTER OF:

PERMADENT PRODUCTS CORPORATION,

Debtor.

ORDER DISMISSING PROCEEDINGS

----------x

At New York, in said District, on the 21 day of April, 1961.

A hearing having been held before me on April 20, 1961, d it appearing that an arrangement was not proposed within the me fixed by the Court, and after hearing LEVIN & WEINTRAUB, torneys for the debtor, and DAVID HAAR, attorney for a creditor, d upon all the proceedings had before me at said hearing, and e deliberation having been had thereon, and it appearing to be the best interests of creditors, it is

ORDERED, that the proceedings commenced by the filing rein on May 7, 1960, of the debtor's original petition proposing arrangement under Chapter XI of said act be and it hereby is smissed.

Referee in Bankruptcy

EXHIBIT B - PETITION OF PERMADENT PRODUCTS FOR AN ARRANGEMENT

Under Chapter XI, Bankrupt Arrangement. ct of 1938.

HUB BLUMBERG, INC., LAW BLANK PUBLISHERS
EXCHANGE PLACE, AT BROADWAY, NEW YORK

In the District Court of the United States for the Southern District of New York

In the matter of
PERMADENT PRODUCTS CORPORATION,
Debtor.

In Proceedings for an Arrangement
No. 60-B-268

PETITION IN PROCEEDINGS UNDER CHAPTER XI, §322

To the Honorable
Judges of the District Court of the United States for the Southern District of New York:

MAY 2 - 1960
10 10 AM

THE PETITION of Permadent Products Corporation
a corporation engaged in the business of developing, manufacturing and distributing dental products
which corporation has not been known by any other name or trade name for the past six years.

RESPECTFULLY REPRESENTS:

1. Your petitioner is a business *corporation organized and existing under the laws of the State of Delaware and has had its principal office and its principal place of business at 1780 Broadway, New York, New York within the above judicial district, for a longer portion of the six months immediately preceding the filing of this petition than in any other judicial district.

2. †No bankruptcy proceeding, initiated by a petition by or against your petitioner, is now pending.

3. Your petitioner is insolvent [and] unable to pay its debts as they mature], and proposes the following arrangement with its unsecured creditors:

Debtor intends to propose a plan of arrangement pursuant to the provisions of the Bankrutcy Act.

*Moneyed, Business or Commercial.
†If Bankruptcy proceeding is pending and this petition is brought under Chapter XI, Section 321, strike out this allegation and recite proceedings heretofore had.

BANKRUPTCY DOCKET
UNITED STATES DISTRICT COURT JA29 60 B 260

C. Form No. 117 Rev.

EXHIBIT B - BANKRUPTCY COURT DOCKET ENTRIES

TITLE OF CASE	DATE	NAME OR RECEIPT NO.	REC.	DISB.
In the matter of	1960			
	May 7	Deposit	45	
	5-10	Petition		40 —
	4/27/61	Ref. Ltr.		5
PERMADENT PRODUCTS CORPORATION,				
for relief under Chapter XI Section 322				

STATISTICAL RECORD	ATTORNEYS
U.S. 24 mailed	Levin & Weintraub
U.S. 19 mailed	2 Lafayette St., NYC 7
	REFEREE AND TRUSTEE
	Referee: Asa S. Herzog, Esq.
	Trustee:

DATE	PROCEEDINGS
May 7-60	Filed petition, list of creditors, summary of assets & liabilities, statement of executory contracts and affdvt of John Weber pursuant to Rule XI-2 - referred to Herzog - cs
May 9-60	Filed true copy of referee's order authorizing debtor continue business
Sep 8-60	Filed schedules & statement of affairs - cs
Jun 10-60	Filed registered mail #110175 from University of Oregon Dental School, 611 S.W. Campus Drive, Sam Jackson Park, Portland 1, Oregon - dlvd to referee
Apr 24-61	Filed referee's certificate closing case etc. 2 vols cls & 1 vol testimony (dismissed)
Apr 21-61	Filed true copy of referee's order dismissing Chap. XI proceeding

4. The schedule hereto annexed, marked Schedule A, ~~and verified by the oath of the undersigned officer of your petitioner, contains a full and true statement of all its debts, and as far as it is possible to ascertain, the names and places of residence of its creditors, and such further statements concerning same as are required by the provisions of the Act of Congress relating to bankruptcy.~~ contains a statement of all of the creditors of the debtor.

5. The schedule hereto annexed, marked Schedule B, ~~and verified by the oath of the undersigned officer of your petitioner, contains an accurate inventory of all the property real and personal, and such further statements concerning said property as are required by the provisions of said Act,~~ contains a summary of the assets and liabilities of the debtor.

6. The statement hereto annexed, marked Exhibit 1, and verified by the oath of the undersigned officer of your petitioner, contains a full and true statement of all its executory contracts, as required by the provisions of said Act.

7. ~~The statement hereto annexed, marked Exhibit 2, and verified by the oath of the undersigned officer of your petitioner, contains a full and true statement of its affairs, as required by the provisions of said~~ XXXX That annexed hereto is an affidavit under Rule XI-2.

WHEREFORE your petitioner prays that proceedings may be had upon this petition in accordance with the provisions of chapter XI of the Act of Congress relating to bankruptcy.

PERMADENT PRODUCTS CORPORATION,
Petitioner -Debtor

By JOHN WEBER, John Weber
president of said corporation

(SEAL)

LEVIN & WEINTRAUB
Attorneys for debtor

By Harris Levin
Harris Levin, a partner

STATE OF NEW YORK }
COUNTY OF NEW YORK } ss.:

JOHN WEBER being duly sworn deposes and says that he is the president of PERMADENT PRODUCTS CORPORATION the petitioner named in the foregoing petition, and does hereby make solemn oath that the statements contained therein are true, according to the best of his knowledge, information and belief; that the reason why this verification is made by deponent and not by the petitioner herein, is that said petitioner is a corporation; and that deponent is the officer of said corporation duly authorized by its Board of Directors to execute and verify said petition on its behalf.

Subscribed and sworn to before me this
6 day of MAY 1960. John Weber
John Weber

(Official Character)

N. B.—Oaths to the above petition, and the schedules thereto annexed, may be administered by officers authorized to administer oaths in proceedings before Courts of the United States, or under the laws of the State where the same are to be

EXHIBIT B - REFEREE'S CLAIM REGISTER JA31

BANKRUPTCY DOCKET OF ASA S. HERZOG REFEREE

IN THE MATTER OF

PERMADENT PRODUCTS CORPORATION

ADDRESS: 1780 Broadway, NYC
OCCUPATION:
EMPLOYER:

RECEIVER:
ADDR:
TRUSTEE:
ADDR:

ATTORNEYS FOR
PET. CR:
ADDR:

BKPT: Levin & Weintraub
ADDR: 2 Lafayette St. NYC
RECVR:
ADDR:

TRUSTEE:
ADDR:

PETITION FILED Mar 7, 1960
ADJUDICATED
1ST MEETING
LAST DAY FILING CLAIMS
DISCHARGE

VOL.
ROV.
INV.
CH. XI
SEC.

IS ANY INTEREST IN REAL ESTATE INVOLVED?

DIVIDENDS PAID (DATE AND PERCENT)

OTHER ITEMS

DATE	PROCEEDINGS	RECEIPTS	DISBURSEMENT
9, 1960	Received from Clerk of Court, two (2) copies of Petition		
	List of Creditors and Affidavit under Rule XI-2.		
5/9	Sent notice of Rule XI-4 to 5		
	10 (ten) largest creditors. Filed		
	E.S. affidavit of Mailing		
	Order signed extending date		
	time to file schedule		
	Order signed terminating		
	debtor to operate its		
	business. Sent certified		
	copy of Order to Atty		
	for A. Filed certified		
	copy of Order with Clerk		
	of Court		
	Order signed setting meeting		

BANKRUPTCY FORM NO. 70

DATE	PROCEEDINGS	RECEIPTS	DISBURSEMENTS
5/20	Order signed permitting debtor to employ Counsel		
16	Sent 87 notices of Initial Meeting to creditors. Filed C.C. Affidavit of Mailing.		
16	Rule 41-4 hrg. held & adjourned to June 2 at 10 A.M.		
5/13	Def & OSC of Wells vs Berger et al filed with Affidavit of Service		
5/16	Order signed permitting the extension of filing Schedules		
16	Rule 41-4 ~~hrg~~ compliance adjourned to June 2 at 10 AM		
19	OSC adjourned to June 2 at 10 AM		
17	Filed Duly new Record affidavit of Mailing		
2	Initial Meeting held & adjourned to August 4th @ 10 A.M. Rule 41-4 hearing & compliance held & adjourned to August 4th @ 11 A.M. Nathan B. Ingelson of 521 5th Ave. NYC was elected tentative trustee. Committee of creditors elected. Orders signed ~~re~~ approving election of		

BANKRUPTCY FORM NO. 10A

DATE	PROCEEDINGS	RECEIPTS	DISBURSEMENTS
	committee.		
	Adj. O.S.C. vs. Beregin adjourned to June 9th @ 11:30 A.M.		
6/9	Adj. O.S.C. vs. Beregin adjourned to June 16th @ 11:30 A.M.		
16	O.S.C. vs. Beregin adjourned to June 21st at 10 A.M.		
20	Petition & N/M by debtor-in-possession vs. Beregin filed. Order signed extending time to file schedules to July 20th.		
21	Adj. O.S.C. Notice of Motion & Adj. O.S.C. vs. Beregin adjourned to June 30 at 10 A.M.		
30	Adj. O.S.C. Adj. M/M & Adj. O.S.C. vs. Beregin adjourned to July 14 at 11 A.M.		
7/14	Adj. O.S.C. Adj. M/M & Adj. O.S.C. vs. Beregin adjourned to July 26 at 11 A.M.		
26	Adj. O.S.C., Adj. M/M & Adj. O.S.C. vs. Beregin adjourned to August 9th @ 11 A.M.		
27	Order signed extending time to file schedules		
8/4	Adj. Initial Meeting held & adjourned & Petitioner sworn at 10 A.M. Adj. Rule 41-4 hrg & compliance adjourned to September 7 at 10 AM		

BANKRUPTCY FORM NO. 70A

DATE	PROCEEDINGS	RECEIPTS	DISBURSEMENTS
8/9	Adj OSC, Adj M/M & Adj OSC vs. Bergen adjourned to August 25 at 11 A.M.		
25	Adj OSC, Adj M/M & Adj OSC vs. Bergen adjourned to September 7 at 3 P.M.		
Aug 24	Order signed extending debtor time to file schedules etc to September 7, 1960		
9/7	Adj Initial Mtg, Adj Rule XI-4 hrg & compliance adjourned to September 21 at 10 A.M.		
	Adj OSC Adj M/M & Adj OSC vs. Bergen Held & closed		
14	Referee files decision re Eugene M. Bergen etc		
21	Adj Initial Meeting Adj Rule XI-4 hrg & compliance held & adjourned to January 17 1961 at 10 A.M.		
10/6	Adj Initial Mtg & Adj Rule XI-4 hrg & compliance Held & adjourned to April 20 at 10 A.M.		
18	~~Petition and notice of meeting of Peter Stuart filed.~~		
31	~~Debtor filed Report of Operation.~~		
31	~~Petition and notice of meeting of Industrial Tape Corp filed.~~		
Feb 20	Adj Initial Meeting & Adj Rule XI-4 Held & Closed		

JA35

REFEREE'S CLAIM REGISTER RE PERMADENT PRODUCTS CORPORATION CAUSE NO. 6

DATE FILED	NO.	NAME AND ADDRESS OF CLAIMANT AND ATTORNEY	AMOUNT FILED AND ALLOWED	REMARKS
5/10	P 1	Howard Sternberg 150-10 71st Ave Flushing, N.Y.	FILED 4,200.00 ALLOWED	
12	P 2	Jay G. Kohn, 3020 DeKalb Ave Bronx, N.Y.	FILED 500.00 ALLOWED	
1[illegible]	3	Oppenheim, Appel Dixon & Co. 2 Broadway NYC Ralph K. Jacobs Jr. 225 Broadway, NYC	FILED 12,000.00 ALLOWED	
23	4	The 65 Security Plan, 13 Astor Pl. NYC Weisman Allan Spett & Sheinberg, 1501 Bway, NYC	FILED 1,083.17 ALLOWED	
24	P 5	N.Y. State Unemployment Ins. Fund P.O. Box 551, Albany, N.Y.	FILED 4,466.27 ALLOWED	
	P 6	Mario L. Espinosa, 28-15 Ashley Ave. Bronx, N.Y. Weisman, Allan, Spett & Sheinberg, 1501 Bway, NYC	FILED 103.00 ALLOWED	
	P 7	Aaron Weisfeld, 34-21 21st St. L.I.C., N.Y. " " " " "	FILED 104.12 ALLOWED	
25	8	Peerless Tube Co. 58-76 Locust Ave. Bloomfield Frank J. Mercurio, Esq. 135 Broadway, NYC	FILED 723.39 ALLOWED	
	P 9	Comptroller of City of NY 120 W. 32nd St. NYC	FILED 11,000.00 ALLOWED	
	10	Radio Center Stationery Co. 136 W. 52nd St. NYC	FILED 12.65 ALLOWED	
26	11	Zeitlin Service 17 W. 60th St NYC Milton B. Newman, 32 Court St. Bklyn, N.Y.	FILED 214.24 ALLOWED	
	12	William S. Weingarten 100 North West St Syracuse, N.Y. Smith & Sovik, 300 Wilson Bldg Syracuse, N.Y.	FILED 480.00 ALLOWED	
24	13	Leon Wilder as Trustee of Royalty Inc 280 Madison Ave NYC Robert P. Herzog Esq 280 Madison Ave NYC	FILED 7,000.00 ALLOWED	
6/2	14	David Haber, 310 Jackson Ave Bronx N.Y. Levy Murphy & Stolz Esq 122 E 42nd St. NYC	FILED 32,000.00 ALLOWED	
	15	Levy, Murphy & Stolz, 122 E. 42nd St NYC " " "	FILED 50,000.00 ALLOWED	
	16	Irving M. Stolz 122 E 42nd St. NYC " "	FILED 2,162.2[illegible] ALLOWED	
	17	Royal State Bank of New York 245 5th Ave NYC " " " " "	FILED 82,632.60 ALLOWED	
	18	Fisher Scientific Company Greenwich & Morton St. NYC Harry H. [illegible], 122 E. 42nd St NYC	FILED 107.11 ALLOWED	
10	19	State Tax Commission Albany N.Y.	FILED under ALLOWED	

BANKRUPTCY FORM NO. 71

JA36

REE'S CLAIM REGISTER RE

CAUSE NO.

NO.	NAME AND ADDRESS OF CLAIMANT AND ATTORNEY	AMOUNT FILED AND ALLOWED	REMARKS
20	Johnson Matthey & Co. Inc. 608 Fifth Ave. NYC	FILED 10,063.34 ALLOWED	
21	Intra Mar Transport Corp. 42 Stone St NYC	FILED 47.86 ALLOWED	
P 22	David Bialos 11271 Carolyn Lane Garden Grove, Calif. Harry Cron Esq 127 Schermerhorn St. Bklyn N.Y.	FILED 1,603.34 ALLOWED	
23	David Bialos 11271 Carolyn Lane Garden Grove, Calif. " " "	FILED [illegible] ALLOWED	
24	Professional Linen Service Inc 520 W. 27th St. NYC	FILED 936.30 ALLOWED	
25	Charles Johnson Jr 1025 Fifth Ave. NYC Raphael, Searles & Vischi	FILED 27,403.5[illegible] ALLOWED	
P 26	Employment Security Agency Georgia Dept of Labor. 182 State Labor Bldg Atlanta, Ga.	FILED 298.24 ALLOWED	
27	Consolidated Edison Co of N.Y. 4 Irving Pl NYC Franklin & Edwards 4 Irving Pl. NYC	FILED 4.04 ALLOWED	
28	Evelyn Johnson 1025 Fifth Ave NYC Raphael Searles & Vischi	FILED 5,000.00 ALLOWED	
29	Jack Lichtenfeld, 18 E 41st St NYC " " "	FILED 4,[illegible].03 ALLOWED	
P 30	State Tax Commission Albany. N.Y.	FILED unstated ALLOWED	
P 31	State Tax Commission Albany. N.Y.	FILED 1,086.25 ALLOWED	
32	Julius Wittman 806 8th Ave. NYC Feldman & Burnett Esq 30 E 40th St. NYC	FILED 248.97 ALLOWED	
P 33	Comptroller of City of N.Y. 120 W 32nd St. NYC	FILED 5,350.26 ALLOWED	Amended
P 34	Director of Internal Revenue 484 Lexington Ave. NYC	FILED 48,349.23 ALLOWED	
P 35	State Tax Commission Albany N.Y.	FILED 1,291.61 ALLOWED	Amended
36	Manpower Inc, 820 Plankinton Ave Milwaukee Wisc Rozen Lewis, Buckner & Gross 66 Court St, Bklyn N.Y.	FILED 202.28 ALLOWED	
37	Mattoon Dental Clinic 1521 Charleston Ave Mattoon Ill. Lawrence Hunt 55 Liberty St. NYC	FILED 1,250.00 ALLOWED	
38	Jones Decorating Co. 2807 Sunset Blvd, Los Angeles Calif Feldman & Burnett Esq 30 E 40 St	FILED 53.40 ALLOWED	

REFEREE'S CLAIM REGISTER RE— JA37 — CAUSE NO.

DATE FILED	NO.	NAME AND ADDRESS OF CLAIMANT AND ATTORNEY	AMOUNT FILED / ALLOWED	REMARKS
1/22	39	William Blank, 331 [illegible] Brooklyn, N.Y.	FILED [illegible] ALLOWED	
24	40	Jones Asbestos Co. 39 Cortlandt St. N.Y.C. Telemann & Brandt, 32 E. 40th St. N.Y.C.	FILED 76.12 ALLOWED	
1/2	41	Mechanical Contracting Co. 2249 N. 41st St. Phila. Pa.	FILED [illegible] ALLOWED	
1/2	42	Hanover Horse & Motor Transfer Co. 439 11th Ave. N.Y.C.	FILED [illegible] ALLOWED	
	43	The C. C. Mosley Co. 3207 Washington Blvd. Ogden, Utah	FILED 145.00 ALLOWED	
	44	Whalen and Doe, 324 Lafayette Street, N.Y.C.	FILED 176.37 ALLOWED	
	P 45	State Tax Commission, Albany, N.Y.	FILED 1120.00 ALLOWED	
1/19	P 46	N.Y. State Liquor Control Dept. P.O. Box 131, Albany, N.Y.	FILED 6.00 45 ALLOWED	Amended
1/10	P 47	Sally R. Elias 89-18 66th Road, Rego Park	FILED 67.00 ALLOWED	
17	48	New York Journal of Industry 3 Rockefeller Plaza, N.Y.C. Jacob H. Rosenberg, Treasurer, Silver Key	FILED 104.40 ALLOWED	
19	P 49	H William Kehl, 31 Chambers St. N.Y.C.	FILED 1451.25 ALLOWED	Lien Priority
24	50	Charles W. Forman Jr. & William O. Stumpf, 2190 S.E. 17th Causeway, Ft. Lauderdale, Fla.	FILED 25.58 ALLOWED	Ft. Lauderdale, Fla
	51	Sigmund Katz, 24 Coolidge Ave. West Orange, N.J.	FILED 1200.00 ALLOWED	
	52	Gertrude Katz 24 Coolidge Ave. West Orange, N.J.	FILED 600.00 ALLOWED	
25	53	Dan Austrian, 337 E. 50th St. Telemann & Brandt, 32 E. 40th St. N.Y.C.	FILED 107.86 ALLOWED	
26	54	Shaw & Magoon Dental Laboratory 428 Capitol Ave. Hartford, Conn. David Goodley - 424 Central Ave. Cedarhurst, N.Y.	FILED 62.34 ALLOWED	
1/21	1 55	Director of Labor of State of Illinois, 165 North Canal St. Chicago, Ill.	FILED 156.38 ALLOWED	
12-7	56	Professional Tenders Corp. 14 Union Sq. West [illegible] Steve & Bruce Co. 105 West [illegible] St.	FILED 34.18.70 ALLOWED	Dr. Ge 38
	57	General Dental Supply Co. 14 Union Square West	FILED 74.43 ALLOWED	

U. S. GOVERNMENT PRINTING OFFICE 16—57676-1

BANKRUPTCY FORM NO. 71

REFEREE'S CLAIM REGISTER RE

CAUSE NO. JA38

NO.	NAME AND ADDRESS OF CLAIMANT AND ATTORNEY	AMOUNT FILED AND ALLOWED	REMARKS
58	National Cash Register Co. Main + K Streets Dayton, Ohio	FILED 307.30 ALLOWED Fully	[illegible]
59	National Cash Register Co. Main + K Street Dayton Ohio	FILED 658.68 ALLOWED	" " " "
60	[illegible] [illegible]	FILED [illegible] ALLOWED [illegible]	amended
61	[illegible] [illegible] Street [illegible]	FILED 3.[illegible] ALLOWED	
62	[illegible] [illegible]	FILED [illegible] ALLOWED	
63	University of Oregon [illegible] 11 S.W. [illegible] Portland, Oregon	FILED [illegible].15 ALLOWED	
64	[illegible] [illegible]	FILED [illegible] ALLOWED	
65	Director of Labor State of Illinois 165 North Canal St. Chicago Ill	FILED [illegible] ALLOWED	supplemental
66	Dept of Employment State of Calif. 800 Capitol Ave Sacramento 14 Calif	FILED 455.11 ALLOWED	
		FILED ALLOWED	
		FILED ALLOWED	
		FILED ALLOWED	
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		FILED ALLOWED	
		FILED ALLOWED	
		FILED ALLOWED	

A TRUE COPY
RAYMOND F. BURGHARDT, Clerk
By B. Edwards
Deputy Clerk

AFFIDAVIT OF BRIAN S. JONES IN OPPOSITION DATED JUNE 20, 1974

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP., Plaintiff, -v- CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN, Defendants.	Civil Action No. 74 C. 467

AFFIDAVIT IN OPPOSITION TO
DEFENDANTS' MOTION TO DISMISS

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP. Plaintiff, -v- CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN Defendants.	Civil Action No. 74 C. 467 AFFIDAVIT IN OPPOSITION TO DEFENDANTS' MOTION TO DISMISS

Brian, S. Jones, being duly sworn, deposes and says:

1. I am an attorney at law admitted to practice in the State of New York.

2. I am the Plaintiff in the above-captioned matter having been appointed as a temporary Receiver on April 6, 1961 and as a permanent Receiver on April 1, 1963 pursuant to an Order of the Supreme Court of the State of New York, said Order attached hereto and identified as Exhibit A.

3. I am advised that Defendants, in the matter herein, have moved this Court to deny Plaintiff its rights based upon an equitable defense of laches, and this Affidavit is submitted in opposition to that Motion, this Affidavit setting forth facts of which I am personally aware and of which I am aware upon information and belief, said facts relating to the delay in Permadent Products Corp. bringing action against violation of its patent and trade secret rights.

4. Upon information and belief, Permadent Products Corp. succeeded in 1958 to a business formed by John Weber, doing business as Permadent Laboratories and Permadent Products, said latter business commencing operation on January 1953.

5. In 1959, Permadent Manufacturing Corp. entered into an agreement with Permadent Products Corp. to acquire all the assets of Permadent Products Corp. in return for an agreement in which Permadent Manufacturing Corp. would manufacture and Permadent Products Corp. would sell dental supplies and in which both parties would share income derived from such manufacture and such sales. This agreement was entered into on July 14, 1959.

6. Upon information and belief, Permadent Manufacturing Corp. served notice of termination of said agreement on March 9, 1960, said termination to take effect 60 days thereafter.

7. On May 7, 1960, a Petition was filed in the United States District Court, Southern District of New York, under Chapter 11 of the Bankruptcy Act and for all practical purposes, the operations of Permadent Products Corp. ceased at that time.

8. On October 4, 1960, William T. Griffin acting as attorney for creditors of Permadent Products Corp. filed a law suit attacking the July 14, 1959 bulk sale transfer, the Defendant being Permadent Manufacturing Corp., Eugene M. Berezin, a principal of Permadent Manufacturing Corp., Pyramid Gold Products, Inc. and Permadent Products Corp. This action was filed in the Supreme Court, State of New York in the County of New York and was assigned Index No. 605-1961.

9. On April 6, 1961, I was appointed the temporary Receiver, said appointment being attacked and said appointment

being finalized by an Order of April 1, 1963, making my appointment as a Receiver permanent.

10. The action by William T. Griffin to set aside the bulk transfer between Permadent Products Corp. to Permadent Manufacturing Corp. was appealed through the Appellate Division and Court of Appeals of the State of New York, after which Plaintiffs were successful and an Order was entered in the Supreme Court of the State of New York setting aside the transfer and ordering that all assets transferred be retransferred back to me as Receiver.

11. In an attempt to settle this matter, I made an agreement with Eugene M. Berezin and Permadent Manufacturing Corp. as to the disposition of assets, said agreement taking the form of a Stipulation. That Stipulation was dated December 31, 1965. Additionally, I had entered into an agreement with David Bromberg, Trustee in Bankruptcy for the Estate of Abraham B. Weinstein, that agreement forming a Stipulation dated January 31, 1966. A motion was made to Judge Gold approving the Stipulation and his motion was opposed by Permadent Products Corp. in 1966. The objection to the Stipulation was dismissed and an Order for the action to be settled was entered on May 25, 1966.

12. In the present action, Patent 3,052,982 is alleged as being infringed and is based upon an application filed October 15, 1959, having Serial No. 846,753. That application was assigned by the inventors to Abraham B. Weinstein, who in turn assigned the patent after it issued on September 11, 1962 to Permadent Products Corp.

13. Application 846,753 was in large part based upon two prior patent applications filed in the United States Patent

Office, these applications having Serial Nos. 479,804 and 348,838. The inventors of these latter applications were identical to the inventors in Serial No. 846,753 which matured into the patent in suit. The inventors in Patent Application Serial Nos. 479,804 and 348,838 assigned their rights to Abraham B. Weinstein who in turn assigned his rights to Permadent Manufacturing Corp. in an agreement of July 22,1959.

14. As a result of the aforesaid transfers of the applications which were later abandoned but formed the basis for the application which matured into the patent in suit and the transfer of the patent in suit, there existed a cloud on the title, so that I, as Receiver, could not assert title in seeking to enforce rights of Permadent Products Corp.

15. Subsequently, David Bromberg, Trustee in Bankruptcy for the Estate of Abraham B. Weinstein, asserted that the transfer of title by Abraham B. Weinstein to Permadent Products Corp. of the patent in suit was defective and threatened to contest title.

16. As a result of the above, I entered into settlement negotiations with all the interested and aggrieved parties so as to effect proper title and be able to enforce all rights of Permadent Products Corp. These settlement negotiations involved the aforementioned David Bromberg, as Trustee of Abraham B. Weinstein, bankrupt, Stern Dental Co.,Inc., a subsidiary of Stern Metals Corp., Orthocast Manufacturing Corp., John Weber, President of Permadent Products Corp., Permadent Manufacturing Corp., Eugene M. Berezin, Harry Rubens, Esq., Monture, Inc., and Permadent Products Corp.

17. By reason of an Order of April 20, 1972 of the Supreme Court of the State of New York, in the County of New York, settlement agreements between the aforementioned parties were approved, said Order being attached hereto and identified as Exhibit B.

18. In addition, assignments attached hereto and identified as Exhibits C and D, assigned all right, title and interest in the patent in suit from Permadent Products Corp., on June 14, 1971, to me and from Permadent Manufacturing Corp., on March 15, 1971, to me, so as to perfect title in said patent to the undersigned. Attached herewith as exhibits E and F are letters relating to the cloud on the title, said letters being provided to me by Mr. James Magee, Jr, retained by me for the purpose of investigating title, (irrelevant portions of said lawyer-client communication being deleted) and by Bergner & Bergner, Esqs. in a letter dated January 25, 1967 from Bertram Ottinger as to the same cloud on title. Both of said reports attest to the cloud on the title in a very detailed fashion, further to the above paragraph 14.

19. Therefore, it was not until April 20, 1972 that I then had free and clear title to the patent in suit and thereafter sought counsel in seeking to enforce all patent and related rights of Permadent Products Corporation.

20. In view of the above, I have acted in a most diligent fashion in seeking to enforce the rights of Permadent Products Corp., including those rights assignable to the patent rights, both United States and foreign, and trade secret rights. Accordingly, upon title being perfected, I diligently pressed

forth seeking settlement and resolution of outstanding violations of the rights of Permadent Products Corp.

21. In January 1973, I retained patent counsel in this matter to enforce all patent and related proprietary rights of Permadent Products Corp. and during the year assisted said counsel in the preparation of relevant documents which resulted in the filing of this litigation and another law suit, BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP., Plaintiff vs. COUNTY DENTAL PORCFLAIN LABORATORY, et al, United States District Court of Connecticut, dated January 2, 1974.

22. Pursuant to my duties as Receiver, not only have I engaged in extensive negotiations to clear the question of title, but I have also been successful in arranging of the financing of protection for United States and foreign patent and related matters, said financing forming a portion of the approved Order of April 20, 1972 with regard to Stern Dental Co., Inc.

Brian S. Jones

BRIAN S. JONES

Sworn to before me on this
20th day of June 1974

Mollie Hartman

Notary Public

MOLLIE HARTMAN
NOTARY PUBLIC, State of New York
No. 03-4520110
Qualified in Queens County
Commission Expires March 30, 1976

EXHIBITS ANNEXED TO FOREGOING AFFIDAVIT

At a Special Term, Part I of the Supreme Court of the State of New York, held in and for the County of New York at the County Court House, on the 1st day of April, 1963.

P R E S E N T:

HON. SAMUEL M. GOLD,

Justice

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JOHNSON, MATTHEY & CO., INC., E. H. HUPPERT CO., JOHN C. GIORDANO, CHARLES A. BUDIN, and STEPHANIE V. BUDIN, WILLIAM P. BOHNE, JR., L. MELVIN ELTING, VITO PERNICONE and ROSE S. PERNICONE, PAUL N. PATTERSON and ALYMPIA PATTERSON, EDWARD GIORDANO and EDWARD N. GIORDANO, JR.,

Plaintiffs,

- against -

PERMADENT MANUFACTURING CORPORATION, EUGENE M. BEREZIN, PYRAMID GOLD PRODUCTS, INC., and PERMADENT PRODUCTS CORPORATION,

Defendants.

Index No. 605-1961

ORDER

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The Receiver, Brian S. Jones, previously appointed Temporary Receiver pending final determination of this action by order of this Court made and entered on April 6, 1961, having moved this Court for an order to appoint him permanent Receiver, grant the Receiver the right to retain legal counsel, direct defendants PERMADENT MANUFACTURING CORPORATION, EUGENE M. BEREZIN and PYRAMID GOLD PRODUCTS, INC., to re-transfer and re-deliver to Brian S. Jones as Receiver for the benefit of creditors the property which is the subject

matter of the action, and directing said defendants to account to said Receiver for the use of any of said property, and for the proceeds of any of such property disposed of by said defendants, and for any and all income, profits or proceeds resulting from any such use or disposition of such property, including certain registered trade marks, copyrights and patents, and applications, in connection therewith, related to products theretofore sold by Permadent Products Corporation.

NOW, on reading and filing the notice of motion dated January 31, 1963, and the affidavit of Brian S. Jones, Receiver, sworn to the 31st day of January, 1963, and the affidavit of James J. Doyle, sworn to the 31st day of January, 1963, in support of said motion, and the answering affidavit of David Bergner, sworn to the 13th day of February, 1963, in opposition thereto, and upon the pleadings and all of the prior proceedings herein including the order for judgment on the remittitur of the Court of Appeals filed and entered November 14, 1962, and the judgment on remittitur of the Court of Appeals duly entered November 19, 1962, and James J. Doyle, Esq., attorney for the Receiver, having appeared in support of the motion and Bergner and Bergner, Esqs., by David Bergner, attorneys for defendants, PERMADENT MANUFACTURING CORPORATION, EUGENE M. BEREZIN, and PYRAMID GOLD PRODUCTS, INC., having appeared in opposition to the motion, and after due deliberation having been had and after filing the written decision of this Court, it is, on motion of James J. Doyle, Esq., attorney for the Receiver, Brian S. Jones,

ORDERED, that Brian S. Jones, of 56 Elderts Lane, Woodhaven, New York, be and he hereby is appointed permanent Receiver of the property which is the subject of this action, and it is further

ORDERED, that the said Receiver give a bond with two sufficient sureties according to law, in the sum of $15,000.00 for the faithful performance of his duties as such Receiver, to be approved by one of the Justices of this Court and filed; and that immediately after qualifying for the performance of the duties of his office by giving and filing such bond, the said Receiver shall, pursuant to the terms of this order, take actual possession of the property which is the subject matter of this action, and any records, books and papers of the defendant, PERMADENT MANUFACTURING CORPORATION, pertaining thereto, and it is further

ORDERED, that the defendants, PERMANDENT MANUFACTURING CORPORATION, EUGENE M. BEREZIN and PYRAMID GOLD PRODUCTS INC., their officers, agents, servants and employees and any and all other persons who may be in possession of or have control over any of such property, within 15 days after service upon them of a copy of this order with notice of entry thereof, deliver possession of any such property of which they may have possession or control, to said Receiver at the place or places where same may be located, and it is further

ORDERED that the Receiver be and he hereby is authorized to retain James J. Doyle, Esq., of 214 Willis Avenue, Mineola, New York, as counsel, and it is further

ORDERED, that Harold L. Lipton, Esq., of 292 Madison Avenue, New York City, N.Y., be and he hereby is appointed Referee to see that the defendant PERMADENT MANUFACTURING CORPORATION or any other defendant who may have become possessed of any of said property which is the subject of this action account to the Receiver for the assets transferred; to take and state the account, including defendants claims; to hear and report together with his recommendations as to the claims and offsets to which PERMADENT MANUFACTURING CORPORATION may be entitled; to hear and report as to the amount which PERMADENT MANUFACTURING CORPORATION shall recover and offset against such assets for monies paid by it for the assets, or for any other offsets to which it may be entitled against same or any other matter relevant thereto, and it is further

ORDERED that until further order of this Court no disposition shall be made by the Receiver or the defendants, their respective officers, agents, servants and employees of the property which is the subject matter of this action, other than as above directed, and it is further

ORDERED that the undersigned retains jurisdiction of this action to pass upon any application which may hereafter be made to carry out, enforce, supplement, or satisfy the terms of this order and upon any application for Referee's, Receiver's or counsel's allowances or compensation; and that any party hereto may apply for such further relief at the foot of this order as to the court may seem just and proper.

E N T E R:

S. M. G.

Filed April 2, 1963

At a Term of the Supreme Court of the State of New York, held in and for the County of New York, at the County Courthouse, on the 20th day of April, 1972.

PRESENT:

HON. SAMUEL M. GOLD,

Justice

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JOHNSON, MATTHEY & CO., INC., E. H. HUPPERT CO., JOHN C. GIORDANO, CHARLES A. BUDIN, and STEPHANIE V. BUDIN, WILLIAM P. BOHNE, JR., L. MELVIN ELTING, VITO PERNICONE and ROSE S. PERNICONE, PAUL N. PATTERSON and OLYMPIA PATTERSON, EDWARD GIORDANO and EDWARD N. GIORDANO, JR.,

Plaintiffs,

- against -

PERMADENT MANUFACTURING CORPORATION, EUGENE M. BEREZIN, PYRAMID GOLD PRODUCTS, INC., and PERMADENT PRODUCTS CORPORATION,

Defendants.

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Index No. 605/1961

ORDER

The RECEIVER, BRIAN S. JONES, having previously been appointed permanent RECEIVER pending final determination of this action by Order of this Court dated April 1, 1963, copy of which is annexed hereto, of certain property which previously belonged to PERMADENT PRODUCTS CORPORATION, and which is the subject of this action, including certain registered trademarks, copyrights, patents and patent applications, and the said RECEIVER,

having filed an affidavit dated April 4, 1972, and James J. Doyle, his duly appointed attorney, having filed an affidavit dated April 4, 1972, from which it appears that the only items of value in such property are the registered trademarks, copyrights, patents and patent applications, and certain molds or dies to manufacture prefabricated teeth and other dental items, and that the only manner in which money may be realized is by entering into royalty agreements for the manufacture and sale of the subject products covered by said patents or patent applications, and for the right to use the registered trademarks and copyrights and the molds in connection therewith, and the said RECEIVER and his attorney having negotiated three royalty agreements and five settlement agreements relating thereto, all of which are attached hereto and have been signed by the RECEIVER, subject to the approval of the Court, and the RECEIVER and his attorney having submitted said agreements to the Court with the request that the authority of the RECEIVER to execute such agreements be approved and confirmed; and copies of said agreements have been submitted to all of the parties interested in this action, or their attorneys, and no objection having been made thereto, and all such interested parties having recommended approval of such agreements by stipulation and consent dated as of the 4th day of February, 1972, copy of which is also annexed hereto,

NOW, on reading and filing the affidavit of Brian S. Jones, sworn to the 4th day of April, 1972, the affidavit of James J. Doyle, sworn to the 4th day of April, 1972, and the stipulation and consent of all parties interested in this action, or their attorneys, dated as of the 4th day of February, 1972, and it appearing that it is for the best interests of the creditors

and of the other parties interested in this action, that the authority of the RECEIVER to execute and deliver such agreements be approved and confirmed, and on further reading the Order of this Court dated the 1st day of April, 1963, from which it appears that the undersigned Justice of the Supreme Court has retained jurisdiction to pass upon any application which may thereafter be made to carry out, enforce, supplement or satisfy the terms of the Order dated April 1, 1963, and that any party thereto may apply for such further relief at the foot of such Order as to the Court may seem just and proper, and upon the pleadings and all of the prior proceedings heretofore had herein, and Brian S. Jones, the RECEIVER, and James J. Doyle, his attorney, having appeared in support of the application to approve and confirm the authority of the RECEIVER to execute said agreements, and it further appearing by the annexed stipulation and consent dated as of February 4, 1972, that all of the parties having any interest in the action or in the recovery of any proceeds therefrom, have recommended that the authority of the RECEIVER to execute such agreements be approved and confirmed, and due deliberation having been had, it is, on motion of James J. Doyle, attorney for the RECEIVER,

ORDERED that the authority of BRIAN S. JONES, the RECEIVER, to execute and deliver the following eight (8) agreements in the form in which such agreements are attached to this Order be and it hereby is approved and confirmed:

(1) Settlement Agreement dated January 31, 1966, between DAVID BROMBERG, ESQ., as Trustee of Abraham B. Weinstein, Bankrupt, and BRIAN S. JONES, as RECEIVER, approved in the United States District Court for the Southern District of New York, on December 4, 1967, by Asa Herzog, Referee;

(2) Settlement Agreement dated June 14, 1971, between STERN DENTAL CO., INC., a subsidiary of the Stern Metals Corporation, and BRIAN S. JONES, as RECEIVER;

(3) Royalty Agreement dated June 14, 1971, between STERN DENTAL CO., INC., a subsidiary of the Stern Metals Corporation, and BRIAN S. JONES, as RECEIVER;

(4) Settlement Agreement with ORTHOCAST MFG. CORP., dated June 14, 1971, and BRIAN S. JONES, as RECEIVER;

(5) Royalty Agreement between ORTHOCAST MFG. CORP., dated June 14, 1971, and BRIAN S. JONES, as RECEIVER;

(6) Settlement Agreement between JOHN WEBER, dated June 14, 1971, and BRIAN S. JONES, as RECEIVER;

(7) Settlement Agreement between HARRY RUBENS, ESQ., dated the 14th day of June, 1971, and BRIAN S. JONES, as RECEIVER; and,

(8) Royalty Agreement between MONTURE, INC., dated the 21st day of January, 1972, and BRIAN S. JONES, as RECEIVER;

and it is further,

ORDERED, that the RECEIVER be and he hereby is, authorized to do all things, and to execute all documents, necessary or desirable to carry out said agreements, and it is further,

ORDERED that the undersigned retains jurisdiction of this action to pass upon any further application which may hereafter be made, to carry out, enforce, supplement or satisfy the terms of this Order, and to pass upon any application for RECEIVER's or counsel's allowance or compensation and that any party hereto may apply for such further relief at the foot of this Order as

to the Court may seem just and proper.

ENTER:

S. M. L.

Justice of the Supreme Court of the State of New York

ASSIGNMENT

WHEREAS, PERMADENT PRODUCTS CORPORATION, a corporation of the State of New York, by an assignment, recorded in the United States Patent Office on October 5, 1962, became the assignee of United States Patent 3,052, 982, issued September 11, 1962, for FUSED PORCELAIN-TO-METAL TEETH, to Morris Weinstein, deceased, by Lenore K. Weinstein, Administratrix, Sigmund Katz, and Abraham B. Weinstein; and

WHEREAS, BRIAN S. JONES, a citizen of the United States of America, having an office at 40 Wall Street, New York, New York, is desirous of acquiring as RECEIVER of the assets of PERMADENT PRODUCTS CORPORATION, all right, title and interest in and to the invention described and claimed in said patent, for the United States and all foreign countries;

NOW, THEREFORE, for a good and valuable consideration, the receipt of which is hereby acknowledged, PERMADENT PRODUCTS CORPORATION, by these presents, does sell, assign, and transfer unto said BRIAN S. JONES, as RECEIVER, the full and exclusive right, title and interest in the territory of the United States of America, and all foreign countries, in and to said patent 3,052,982, the invention described in said patent, in and to any and all divisions, reissues, continuations or extensions thereof, all rights of priority under the International Convention, and to any and all applications and patents describing said invention in countries foreign to the United States, as set forth on Schedule A-I attached.

PERMADENT PRODUCTS CORPORATION covenants with BRIAN S. JONES, as RECEIVER, his successors, assigns and legal representatives, that the rights and property herein conveyed are free and clear of all encumbrances and that PERMADENT PRODUCTS CORPORATION has full right to convey the same as herein expressed.

PERMADENT PRODUCTS CORPORATION hereby undertakes that it will not at any time on any ground whatsoever raise or cause to be raised or assist in raising any question concerning or any objection to the validity of said United States patent, or participate in any way in any opposition of any kind, to foreign patents or applications based thereon.

IN WITNESS WHEREOF, said PERMADENT PRODUCTS CORPORATION has caused this instrument to be executed and its corporate seal to be hereunto affixed by a duly authorized officer this day of

PERMADENT PRODUCTS CORPORATION

(Seal) By: John Weber
John Weber, President

STATE OF NEW YORK)
) SS.:
COUNTY OF NEW YORK)

On the 14th day of June, 1971, before me personally came

JOHN WEBER

to me known, who, being by me duly sworn, did depose and say that he resides at No. 521 West 23rd Street, New York, New York, 10011, that he is the President of

PERMADENT PRODUCTS CORPORATION

the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that he signed his name thereto by like order.

(Sgd.) James J. Doyle

JAMES J. DOYLE
Notary Public, State of New York
No. 41-6092410
Qualified in Queens County
Commission Expires March 30, 1972

SCHEDULE A - I

FOREIGN PATENTS

The following are the foreign countries referred to in paragraph FIFTH, i), for which the non-exclusive license is granted herein as stated in such paragraph.

1.	Australia	Patent No. 275,106
2.	Belgium	Patent No. 622,313
3.	Canada	Patent No. 856,252
4.	England	Patent No. 943,190
5.	France	Patent No. 1340908
6.	Germany	Patent Application P30104
7.	India	Patent No. 84,061
8.	Italy	Patent No. 674,476
9.	Japan	Patent No. 516,521
10.	Mexico	Patent No. 81,757
11.	Spain	Patent No. 282,440
12.	Switzerland	Patent No. 389,157
13.	Sweden	Patent No. 214,649.

AGREEMENT OF ASSIGNMENT

AGREEMENT made this 15th day of March , 1971, between PERMADENT MANUFACTURING CORPORATION (hereinafter referred to as the "Assignor"), a domestic Corporation with its principal place of business located at 123 Schermerhorn Street, Brooklyn, New York, and BRIAN S. JONES (hereinafter referred to as the "Assignee"), as RECEIVER of PERMADENT PRODUCTS CORPORATION, of 85-55 85th Street, Woodhaven, New York,

WITNESSETH:

The Assignor, for good and valuable consideration, the receipt whereof is hereby acknowledged, does here by grant, convey, assign, transfer and set over unto the Assignee all of the Assignor's right, title and interest in and to all of the trademarks, and tradenames designated and set out in SCHEDULE I annexed hereto, together with any changes or additions made in or to any of them from the date of their inception to the date hereof, inclusive of any changes or additions now pending uncompleted or undetermined, together with the good will appurtenent to said marks and names, and to the copyright set out in SCHEDULE II annexed hereto.

The Assignor, for itself, its successors and assigns, does expressly reserve, however, the right to an irrevocable non-exclusive use of all such trademarks and tradenames and said copyright in perpetu-

ity, and the said Assignor's reservation of use aforesaid shall include the right to sublicense and/or grant the right of non-exclusive use or uses of said trademarks, tradenames and copyright, in whole or in part, to any person, firm, corporation or other entity with or without consideration for any such sublicense or grant, without any liability to the Assignee aforesaid, his successors or assigns, nor a duty to account to anyone therefor, including said Assignee, but subject in perpetuity to Assignee's right to cancel Assignor's license, or any sublicense granted by Assignor, in the event that Assignor or his sublicensee, as the case may be, sells products under any of said trademarks or tradenames that differ significantly in their nature or quality from the products presently on the market under said trademarks and tradenames. The said Assignee as RECEIVER aforesaid, for his successors and assigns, by accepting this assignment, does covenant, warrant and agree that he will not assign, in whole or in part, license, sublicense, or otherwise grant any use of any such trademarks, tradenames or copyright to any person, firm, corporation or other entity other than to such that are or may become licensees of said RECEIVER under or pursuant to U.S. Patent 3,052,982 or such other patents or patent rights previously assigned to said RECEIVER pursuant to a certain agreement and stipulation approved by the Supreme Court of the State of New York, County of New York, in an action entitled Johnson, Matthey & Company, Inc., et al. vs. Permadent Manufacturing Corporation, et al., under Index No. 605/1961.

The Assignee, as RECEIVER aforesaid, further covenants, warrants and agrees, for himself, his successors and assigns, that

he will timely register and maintain, or cause to be registered and maintained, and take such steps as may be necessary to renew and keep in effect, the said trademarks, tradenames and copyright hereby assigned to him. The said Assignee shall give reasonable advance notice to the Assignor, in writing, as to any trademark, tradename, or copyright he intends to abandon or which he will not seek to renew or maintain, and upon demand therefor, will reassign to the Assignor any such trademark, tradename or copyright in order that the said Assignor herein shall be enabled to timely renew or maintain the same in its own name, subject however, to any prior sublicense or other non-exclusive use theretofore granted by the Assignee. This assignment is made without recourse against the Assignor.

IN WITNESS WHEREOF, the undersigned have set their hands and seals this 15th day of March, 1971.

PERMADENT MANUFACTURING CORPORATION

By: _____
Eugene M. Berezin

_____
BRIAN S. JONES, as RECEIVER

STATE OF NEW YORK)
) SS.:
COUNTY OF NEW YORK)

On this 15th day of March , 1971, before me came EUGENE M. BEREZIN, President of Permadent Manufacturing Corporation, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged that he executed the same.

Notary Public

DAVID BERGNER
NOTARY PUBLIC, State of New York
No. 31-0254500
Qualified in New York County
Commission Expires March 30, 19[illegible]

STATE OF NEW YORK)
) SS.:
COUNTY OF NEW YORK)

On this 15th day of March , 1971, before me personally came BRIAN S. JONES, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged to me that he executed the same.

Notary Public

[illegible]

SCHEDULE I

PERMADENT REGISTERED TRADE MARKS:

I. PERMAPONTIC, Reg. No. 636,249, issued Oct. 23, 1956 to John Weber:

A. Assigned June 11, 1958, by John Weber to Permadent Products Corp., recorded in the Patent Office July 1, 1958 on Reel 43, Frame 23.

B. Affidavit under Section 8 filed Oct. 19, 1962, by John Weber President, Permadent Products Corp.

II. PERMADENT, Reg. No. 641,090, issued Feb. 5,1957 to John Weber
PERMAJACKET, Reg. No. 644,825,issued April 30, 1957 to John Weber;
PERMIUM, Reg. No. 644,826, issued April 30, 1957 to John Weber; and,
PERMAPORCELAIN, Reg. No. 646,169, issued May 28, 1957, to John Weber:

A. Assigned June 11, 1958 by John Weber to Permadent Products Corp., recorded in the Patent Office July 1, 1958 on Reel 43, Frame 23, as a group.

B. Assigned July 14, 1959 by Permadent Products Corp. to Permadent Manufacturing Corp., as a group.

C. Affidavit under Section 8 filed April 29, 1963, by Brian S. Jones, Receiver, Permadent Products Corp. with certified copy of the court order of April 1, 1963, an affidavit and order filed separately for each mark.

III. PERMAROD, Reg. No. 678,952, issued May 19, 1959 to Permadent Products Corporation, and

PERMASTEM, Reg. No. 678,953, issued May 19, 1953, to Permadent Products Corporation:

A. Assigned July 15, 1959, by Permadent Products Corp., to Permadent Manufacturing Corp., as a group with the marks in II above.

B. An affidavit under Section 8 will be required to be filed for each of these two marks during the sixth year of registration, between May 19, 1964 and May 19, 1965. Such affidavit was filed.

IV. PERMEPOXY, Reg. No. 683,743, issued Aug. 18, 1959, to Permadent Products Corporation:

A. Application Ser. No. 68,420 for registration of this mark was assigned by Permadent Products Corp. to Permadent Manufacturing Corp. on July 14, 1959 in a group with the marks in II above.

B. An affidavit under Section 8 will be required to be filed for this mark during the sixth year of registration, between Aug. 19, 1964 and Aug. 18, 1965. Such affidavit was filed.

Assigned by the present assignment to BRIAN S. JONES, as RECEIVER of Permadent Products Corporation.

SCHEDULE II

PERMADENT COPYRIGHT

Copyright Reg. No. A 368922, title: PERMADENT PREPARATION and Impression Procedure, by Permadent Products Corporation, first published December 9, 1958, registered December 18, 1958.

Assigned July 14, 1959 by Permadent Products Corp. to Permadent Manufacturing Corp.

Assigned by the present Assignment to BRIAN S. JONES, as RECEIVER of Permadent Products Corporation.

EXHIBIT E - LETTER OF JAMES MAGEE, JR. DATED NOVEMBER 7, 1968 TO BRIAN JONES

JAMES MAGEE, JR.
ATTORNEY AT LAW
~~673 BARTH DRIVE~~
~~BALDWIN, NEW YORK~~
PATENT LAWYER
7614 Glencliffe Road
Manlius, New York 13104
~~516-MA-1-2100~~

November 7, 1968

Brian Jones, Esq.
Hogan and Kelleher
40 Wall Street
New York, New York 10005

Dear Brian:

You have requested a report on the title of United States Patent 3,052,982 issued September 11, 1962, to the inventors Weinstien et al. on an application, Serial Number 846,753, filed October 15, 1959. The application on which this patent issued was assigned by Sigmund Katz and the estate of Morris Weinstien to co-inventor Abraham Weinstien by an instrument dated October 13, 1959. Abraham Weinstien assigned his interest in the invention and the application to Permadent Products Corporation by instrument dated October 22, 1959. Accordingly, the record title to this patent is now in Permadent Products.

Although the patent in question does not specifically refer back to any prior applications as is the usual case with substitute and continuing applications, it is stated in Schedule B of the stipulation of settlement between Johnson, Matthey & Co., Inc. et al. against Permadent Manufacturing Corp. et al. that the claims of the patent were taken from applications, Serial Nos. 479,804 and 348,838, both of which are understood to be abandoned. According to Schedule B, all of the claims of the patent are based on patentable subject matter contained in the abandoned applications. This statement indicates that the application 846,753 on which the patent issued does not claim an invention which is distinct from the inventions claimed in the abandoned applications.

A preliminary investigation in the assignment records of the United States Patent Office shows that Sigmund Katz and the estate of Morris Weinstien assigned all of their right, title, and interest in the inventions disclosed in applications 479,804 and 348,838 to Abraham Weinstien. Subsequently, Abraham Weinstien by an instru-

ment dated July 22, 1959, assigned all his interest in the invention to Permadent Manufacturing, and in the same instrument Permadent Products assigned its interest in an exclusive license. We have no information as to the details of this license, though the recorded instrument indicates that certain rights were reserved to Dental Supply Company under another license. The scope of these rights is also unknown.

From the above, it appears that Permadent Products was never a record title holder of application, Serial Nos. 479,804 and 348,838.

That Permadent Products' interest in the abandoned applications appears to have been limited to license rights further complicates the facts which surround your efforts to enforce the patent in question against possible infringers. According to the Stipulation, you are entitled, as receiver, to take title and enforce the patents sold, transferred, and conveyed by Permadent Products which were included in a transfer pursuant to the July 14, 1959, agreement. Since the issued patent, even though set forth in Schedule B of the Stipulation had not been filed at the time of the July 14, 1959, agreement, it can be argued that the receiver is not entitled to the benefits of that patent. Furthermore, no patents, as distinguished from patent applications, were transferred by Abraham Weinstien or Permadent Products to Permadent Manufacturing. It seems that the word "patents" as used in Paragraph 3 of the Stipulation should be construed as patent applications, since the 479,804 and 348,838 applications appear to have been transferred to Permadent Manufacturing pursuant to the agreement of July 14, 1959, which is mentioned in the assignment as recorded in the Patent Office.

Assuming that a single invention or perhaps a closely related group of inventions is involved in both the abandoned applications of the issued patent, it is strange that we find two chains of title, the first carrying title of the applications from the inventors through Abraham Weinstien to Permadent Manufacturing and the second carrying title from the inventors through Abraham Weinstien to Permadent Products. I think it is essential to obtain copies of the abandoned applications and to determine if, in fact, the inventions claimed therein are the same as the invention or inventions claimed in the issued patent. It strikes me that if Abraham Weinstien had assigned all his interest in the invention to Permadent Manufacturing the subsequent assignment of the issued patent by Weinstien to Permadent Products without the consent of Permadent Manufacturing is open to question.

With respect to direct attempts to enforce the patent by instituting infringement suits, I think that such an attempt at this time would be premature. In the

first place, patents are enforced by the patentee or his successor in title. At this time, you have no standing as a holder of record title to the patent. Indeed, you do not even have an unrecorded title to the patent, per se, although you may have an interest, perhaps of an equitable nature, in the invention claimed in the abandoned applications by virtue of the assignment, to Permadent Manufacturing, of A. B. Weinstien's interest in the inventions and Permadent Products' interest in the license mentioned above.

[illegible] you

With regard to a course of action, I think you should consider taking whatever available means are necessary to obtain legal title to the issued patent. This, of course, will entail a determination of your right to the patent by virtue of the identity of the invention claimed in the patent with the inventions claimed in the abandoned applications which were assigned to Manufacturing as a result of the July 14, 1959, agreement. In the present circumstances, you, as receiver, appear to be legally unable to enforce the patent in view of Weber's refusal to assign it to you based on his arguments that neither this patent nor the application on which it issued (846,753) was involved in the transfer referred to in the stipulation. My preliminary view, however, is that if the identity of inventions referred to above is a fact you are entitled to the benefit of the patent. You should consider means for requesting the court to settle this issue by clarifying the original stipulation by specifically including the patent, as the present embodiment of the abandoned applications, and by compelling Permadent Products to transfer title in order to effectuate the intent of the original assignments of the 348,838 and 479,304 applications to Manufacturing. Permadent Products and Weber should be subject to the court's jurisdiction by virtue of their appearance in the appeal which led to the Stipulation. It can be argued that the assignment of the patent to Products was a nullity since the inventors had already assigned their entire right, title, and interest in the invention (on which the patent is based) to Manufacturing by assigning the abandoned applications. This argument assumes the above-mentioned identity of inventions. I believe the relief requested by you would be within the jurisdiction of a state court since the primary question is one of title and contract rights. These matters do not fall under the exclusive jurisdiction of the Federal Courts under Title 28 USC 1338. Once you

EXHIBIT F - LETTER OF KIRSCHSTEIN, KIRSCHSTEIN, OTTINGER AND FRANK DATED JANUARY 27, 1969 TO BERGNER AND BERGNER

KIRSCHSTEIN, KIRSCHSTEIN, OTTINGER & FRANK
ATTORNEYS AND COUNSELORS AT LAW
PATENT TRADE MARK AND COPYRIGHT CAUSES
[illegible]0 EAST 42nd STREET
NEW YORK, N.Y. 10017
PHONE MURRAY HILL 7 [1098 1099 2237 2507]

MORRIS KIRSCHSTEIN
DAVID B. KIRSCHSTEIN
BERTRAM OTTINGER
BERTRAM FRANK

CABLE ADDRESS
KIRSHMOR, NEW YORK

January 27, 1969

Bergner & Bergner, Esqs.
11 Park Place
New York, New York

Attention: Gerald Blum, Esq.

Re: PERMADENT PATENT 3,052,982

Dear Mr. Blum:

Some time back you raised a question of title as to Patent 3,052,982 issued September 11, 1962. Originally, the question was raised by James Magee, Jr. in a letter of November 7 1968, to Brian Jones, Esq. of Hogan and Kelleher.

The problem briefly phrased is that Permadent Manufacturing Corporation acquired title from Permadent Products Corporation of certain patents and applications in an assignment executed July 22, 1959. Included in this assignment were the inventions described in applications Serial Nos. 348,838 and 479,804. These two applications apparently never matured into patents. We gather that they were abandoned.

Subsequently, a Patent, 3,052,982, issued to Weinstein et al, the inventors. This patent contained the disclosures of the two earlier applications. However, the patent was not assigned to Manufacturing but was assigned to Products subsequent to issuance of the patent. We have corresponded extensively with the Patent Office on this matter and we have had our Washington associate press the Patent Office for a satisfactory explanation.

Gerald Blum, Esq. January 27, 1969

This was not sufficient so we hired the services of a Mr. Carl Levy, who formerly was in charge of the Assignment Branch in the Patent Office and who now is a consultant on patent assignment matters. The result of all of this is as follows.

Firstly we ordered a copy of the Patent Office history of Patent 3,052,982 to see whether we could get some information from that. A copy of this is enclosed.

We call your attention in particular to the second sheet which is a cover letter of October 15, 1959 from Mr. Rubens to the Patent Office. In this letter Mr. Rubens says that of the 26 claims in the application, which ultimately matured into Patent 3,052,982, every claim either was taken verbatim from patent application 348,838 and 479,804 or was derived from a claim taken verbatim. Inasmuch as Manufacturing owned the invention of these two serial numbers, there should be no question but that they own the same invention which appears in the corresponding claims of Patent 3,052,982. Moreover, at Mr. Levy's suggestion, we importuned the Patent Office into issuing a digest of the assignment record which would make a reference connecting issued Patent 3,052,982 with applications 348,838 and 479,804. We enclose a copy of a certificate we obtained to that effect, the same being dated January 16, 1969.

There is an unfortunate rule in the Patent Office in connection with assignments which directly applies to this case. It is that if a second application is filed which discloses the <u>same</u> invention as that of a preceding application which was assigned, the second application will automatically be assigned to the same party. But there is an exception which covers the present set of circumstances. If a second application is filed which differs in some tiny detail from a previously assigned application, the second application will <u>not</u> be automatically assigned. We might mention in passing that none of this would have occurred if, as we had originally suggested, we had been allowed to conduct the prosecution of the earlier applications.

Gerald Blum, Esq. January 27, 1969

To be very technical, if a second application is a "continuation" of an earlier assigned application, the second application will be automatically assigned to the same party. On the other hand, if a second application is a "continuation-in-part" of an earlier assigned application, the second application will not be automatically assigned. It is the "in-part" which is the kicker. It means that there is some difference, whether it be large or small, between the two applications and this difference was not covered by the original assignment. Therefore, the second application is not automatically assigned.

However, by virtue of the certificate we have sent you and by virtue of the Rubens letter we have sent you, it would seem reasonably clear that Manufacturing is the moral owner of the patent. Of course, this is not enough. Manufacturing wants to be the record owner. To do this you would have to ask Products to assign the patent to Manufacturing. You can imagine how far you would get with such a request.

Nevertheless, the formal demand ought to be made. Thereafter, if it is refused, you have two choices. One is to sue Products to force an assignment. As we see it Products would have no defense. The other is, if there is an infringement, to bring suit as plaintiff alleging equitable ownership of title and making Products a party defendent.

The second course of action is the one we would suggest because if there is an infringement, you can combine the infringement cause with the other and demand a transfer of title. Businesswise it will save a good deal of time and eliminate waste motion.

We assume that there is nothing further that need be done at present so we are enclosing a bill for our services to date. This does not include a charge we still will have to make solely for what we will be billed by our Washington associate and by Mr. Levy. Hence, there will be a further bill subsequently.

Very truly yours,

KIRSCHSTEIN, KIRSCHSTEIN,
OTTINGER & FRANK

BY _____

BO/ls
Enclosures
D.M. #7079

OPINION OF PLATT, D.J., DATED JULY 24, 1974 (FILED JULY 25, 1974)

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

- -x

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP.,

Plaintiff,

-against-

CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN,

Defendants.

- -x

74 C 467

Opinion

July 24, 1974

PLATT, J.

Defendants move to dismiss the complaint herein contending that the first claim for patent infringement is barred under the doctrine of estoppel and laches and the second claim for breach of confidential relationship by defendant employees with the plaintiff and misappropriation of plaintiff's trade secrets is barred by the New York statute of limitations and also by the doctrine of equitable estoppel and laches and further that plaintiff has no trade secrets because any and all of the same have been publicly disclosed in plaintiff's patent issued and published on September 11, 1962.

With respect to the first claim, it is undisputed that the patent claimed to be infringed was issued and published on September 11, 1962 and that plaintiff's action for such infringement was not commenced until March 22, 1974, over eleven and a half years later.

With respect to plaintiff's second claim, it is conceded that the five individual defendants left the plaintiff's employ in April of 1959 and founded the defendant CERAMCO, INC. which company thereafter competed directly with the plaintiff by manufacturing, selling and distributing the same material as used in plaintiff's tooth construction.

Plaintiff further alleges in his second claim in his complaint that the individual defendants conspired prior to leaving plaintiff to commit industrial piracy and that shortly thereafter and as a consequence of defendants acts , plaintiff's business diminished, plaintiff filed a Chapter XI petition in bankruptcy and defendants' corporation's business profited and was sold to Johnson and Johnson. More specifically in this connection, plaintiff alleges that defendants wrongfully appropriated plaintiff's trade secrets, wrongfully removed and converted plaintiff's information, documents and materials to their own use, abridged their contractual and fiduciary obligations to the plaintiff, appropriated plaintiff's inventions, performed additional acts of unfair competition and have been unjustly enriched by reason of their malfeasance.

VPI—SS—3-17-72—3036—0183

On March 9, 1960, MANUFACTURING served notice of termination of said agreement to take effect 60 days thereafter. On May 7, 1960, PRODUCTS filed a petition in the U.S. District Court for the Southern District of New York under Chapter XI of the Bankruptcy Act "and for all practical purposes the operations of PERMADENT PRODUCTS CORP. ceased at that time".

Thereafter, on October 4, 1960, an attorney acting for creditors of PRODUCTS filed a lawsuit attacking the 1959 bulk sale transfer made under the agreement between PRODUCTS and MANUFACTURING and on April 6, 1961, plaintiff was appointed the Temporary Receiver of PRODUCTS which appointment was attacked and not made permanent until April 1, 1963.

The action to set aside the bulk transfer was prosecuted successfully through the Court of Appeals of the State of New York and an order was entered directing that all assets be retransferred back to the plaintiff as Receiver. As a result thereof a stipulation was made and entered between the parties and others which was ultimately approved by order of the Supreme Court, New York County, entered on May 25, 1966.

All of these acts initially took place in 1959 and 1960 but plaintiff maintains that the defendants wrongs are "a continuing tort" with respect to which plaintiff is entitled to relief.

As to both claims, plaintiff contends that since the acts of the defendants "materially contributed to the demise of Permadent Products Corp., and as a result thereof, the Chapter XI petition was filed," defendants should not profit from their wrong doing and hence the doctrines of estoppel and laches should not be held applicable to plaintiff's claims herein.

In defense of plaintiff's delay as Receiver in the commencement of this action against violation of plaintiff's patent and trade secret rights, plaintiff claims the existence of a cloud on his title to the patent in suit until April 20, 1972, and sets forth the following facts in support of such contention.

PERMADENT PRODUCTS CORP. was founded in January, 1953, by John Weber under the original name of PERMADENT LABORATORIES AND PERMADENT PRODUCTS and was renamed in 1958. A year later in 1959 PERMADENT PRODUCTS CORP. ("PRODUCTS") entered into an agreement with PERMADENT MANUFACTURING CORP. ("MANUFACTURING") by which the latter acquired all the assets of said PRODUCTS in return for an agreement in which MANUFACTURING would manufacture and PRODUCTS would sell dental supplies and in which both parties would share income derived from such manufacture and sales.

It is significant at this point to note that from and after this date there appears to have been no impediment to the Receiver's prosecution of its second claim herein (the trade secrets claim) except for the Receiver's alleged lack of funds to do so.

With respect to the patent in suit No. 3,052,982, the Receiver maintains that it is based upon an application filed on October 15, 1959, having Serial No. 846753, and that that application was assigned by the inventors to one Abraham B. Weinstein ("Weinstein") who in turn assigned the patent after it was issued on September 11, 1962 to PRODUCTS. Application 846753 was in large part, the plaintiff claims, based on two prior patent applications filed in the United States Patent Office having Serial Nos. 479804 and 348838. The inventors of the earlier applications were identical to the inventors in the application with Serial No. 846753 which allegedly matured into the patent in suit. These inventors in the earlier application Nos. 479804 and 348838 in an agreement dated July 22, 1959, assigned their rights to Weinstein who in turn assigned his rights therein to MANUFACTURING.

As a result of these transfers, one to PRODUCTS and the other two to MANUFACTURING, the Receiver claims that there existed a cloud on his title to the patent in suit so that he

could not assert title in seeking to enforce the rights of PRODUCTS.

In support of these contentions in this respect the Receiver points out that "subsequently David Bromberg, Trustee in Bankruptcy for the Estate of Weinstein, asserted that the transfer of title by Weinstein to PRODUCTS of the patent in suit was defective and threatened to contest title", and to two letters from attorneys dated respectively November 7, 1968 and January 27, 1969, confirming the existence of the alleged cloud on the Receiver's title to the patent in suit.

As a consequence of all of the foregoing, the Receiver avers that he entered into settlement negotiations with all the interested and aggrieved parties "so as to effect proper title and be able to enforce all rights of" PRODUCTS and these negotiations resulted in settlement agreements which were approved by an order of April 20, 1970 of the Supreme Court, New York County, which finally conferred on him on that date "free and clear title to the patent in suit".

In view of the foregoing, the Receiver maintains that he has "acted in a most diligent fashion in seeking to enforce the rights of PERMADENT PRODUCTS CORP., including those rights assignable to the patent rights, both United States and foreign, and to the trade secret rights and

also as a result thereof he was "successful in arranging of the financing of protection" for all such rights.

While the Court is mindful of, and troubled by, the amount of time that has elapsed during which no action has been taken against the alleged infringers, nonetheless the Receiver's problems and difficulties in perfecting clear title to the patent in suit appear to have been substantial and real and he has moved with reasonable dispatch since his title has been perfected and cleared. Taylor Engines, Inc. v. All Steel Engines, Inc., 92 U.S.P.Q. 35 (9th Cir. 1951), Berry v. Bohn Aluminum & Brass Corp., 43 U.S.P.Q. 132 (E.D. Mich. 1939), Skinner v. Dow Chemical Co., Inc., 85 U.S.P.Q. 191 (E.D. Mich. 1950). Accordingly, this portion of defendants' motion is denied.

As indicated above, however, the same does not hold true with respect to the second part of defendants' motion addressed to the trade secrets claim. Here the alleged wrong occurred in and shortly after April of 1959. A whole year or more elapsed before PRODUCTS filed its petition and Chapter XI during which no steps were taken to restrain the alleged wrongdoers. Moreover, from and after May 25, 1966 the Receiver was free to serve and file a summons and complaint. His claim of lack of finances to institute such an action is not an excuse for inaction for a period of eight additional years.

The New York Statute of Limitations (three years for injury to property CPLR Section 214(4) and six for contractual obligations express or implied CPLR Section 213(2)) appear to be a complete bar. Monolith Portland Midwest Co. v. Kaiser Aluminum, 407 F.2d 288 (CA 9, 1969); Shatterproof Glass Corp. v. Guardian Glass Co., 322 F. Supp. 854 (D.C. Mich. 1972); E.I. duPont de Nemours Power Co. v. Masland, 244 U.S. 100; Epstein v. Dennison Mfg Co., 314 F. Supp. 116 (D.C. S.D.N.Y. 1969); Heyman v. Ar. Winorich, Inc., 325 F. 2d 584 (CA 2, 1963). But compare Sachs v. Cloett Peabody & Co., 177 Misc. 695, 31 N.Y.S. 2d 718 reversed on other grounds 265 App. Div. 497, 39 N.Y.S. 2d 853; General Precision, Inc. v. Ametrek, Inc., 274 N.Y.S. 2d, 340; Koehring Co. v. Nat'l Automatic Tool Co., 150 U.S.P.Q. 777. But even if they are not, the claim should be barred under the doctrine of equitable estoppel and laches. Defendants' motion to dismiss the second claim of the complaint herein is therefore granted.

Settle Order on notice.

Thomas C. Platt
U.S.D.J.

ORDER OF PLATT, D.J., DATED AUGUST 27, 1974 FILED AUGUST 28, 1974 JA82

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF NEW YORK

----------X

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORPORATION,

Plaintiff,

v.

CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN,

Defendants.

Civil Action No. 74 C 467

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ORDER

Defendants having moved to dismiss the first and second causes of action stated in plaintiff's complaint relating to patent infringement, and breach of a confidential relationship and trade secret misappropriation, respectively, and the motion having been argued before the Honorable Thomas C. Platt on June 28, 1974, and Don K. Harness, Esq., Counsel for Defendants, having been heard in support of said motion, and Peter L. Berger, Esq., Counsel for Plaintiff, having been heard in opposition to said motion,

NOW, upon the papers previously filed and served and argument,

IT IS HEREBY ORDERED that defendants' motion to dismiss the first cause of action is denied, and defendants' motion to dismiss the second cause of action is granted.

United States District Judge

Dated: Brooklyn, New York
August 27, 1974

ANSWER OF DEFENDANTS FILED OCTOBER 4, 1974 JA83

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF NEW YORK

----------X

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORPORATION,

Plaintiff,

v.

CERAMCO, INC., A Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN,

Defendants.

Civil Action No. 74 C 467

Before Judge Platt

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ANSWER

Now come defendants, Ceramco, Inc., H. Gordon Pelton, Irving Klaus, John H. Leatherman, and Norman Levine, and through their attorney answer the Complaint herein as follows:

1. Defendants admit that this Court has jurisdiction with regard to the First Cause of Action set forth in the Complaint relating to patent infringement, but in view of the Order of the Court filed August 28, 1974 dismissing the Second Cause of Action set forth in the Complaint defendants deny there is any jurisdiction of this Court for the Second Cause of Action or any action relative to unfair competition.

2. Defendants do not have sufficient knowledge regarding the allegations of paragraph 2 of the Complaint to admit or deny the same and leave plaintiff to his proofs.

3. Defendants admit the allegations of paragraph 3 of the Complaint.

4. Defendants admit the allegations of paragraph 4 of the Complaint except that they deny that H. Gordon Pelton is a stockholder in Ceramco, Inc.

5. Defendants admit the allegations of paragraph 5 of the Complaint except that they deny that Irving Klaus is a stockholder of Ceramco, Inc.

6. Defendants admit the allegations of paragraph 6 of the Complaint except that they deny that John H. Leatherman is a stockholder in Ceramco, Inc.

7. Defendants deny that Norman Levine is treasurer of Ceramco, Inc. and is a stockholder of Ceramco, Inc. but otherwise admit the allegations of paragraph 7 of the Complaint except that Norman Levine is no longer an employee of Ceramco, Inc.

8. Defendants admit that Leon L. Cohen was an original founder of Ceramco, Inc. but otherwise deny the allegations of paragraph 8 of the Complaint.

9. Defendants deny that Ceramco, Inc. makes, uses and sells any materials in violation of any rights granted under U.S. Patent No. 3,052,982. Defendants admit that the material manufactured and sold by Ceramco, Inc. is specifically

used by assemblers in the making of fused porcelain-to-metal teeth. Defendants deny any acts of patent infringement, industrial piracy and unfair trade practices.

10. Defendants admit that U.S. Patent No. 3,052,982 issued to M. Weinstein et al. on September 11, 1962 on an application filed October 15, 1959 by M. Weinstein et al., but deny that such patent was duly and legally issued. Defendants do not have sufficient information as to the ownership of said patent to admit or deny such allegations and therefore leave plaintiff to his proofs.

11. Defendants deny the allegations of paragraph 11 of the Complaint.

12. Defendants deny the allegations of paragraph 12 of the Complaint.

13. Defendants admit that at least certain of defendants had prior knowledge of the patent in suit but deny that any notice of the same was received from plaintiff.

In view of the fact that the Second Cause of Action recited in the Complaint has been dismissed by the Court, no answer is required to paragraphs 14 through 29 of the Complaint.

Further answering the Complaint defendants allege that:

14. The patent in suit is invalid for failure to comply with all the provisions of the Patent Statute, 35 U.S.C., and specifically but without limitation, Sections 102, 103, 111 and 112.

15. Defendants have not infringed any valid claims of said patent in suit as a result of any of their activities.

16. Defendants H. Gordon Pelton, Irving Klaus, John H. Leatherman and Norman Levine, either are or were employees of Ceramco, Inc. and have not themselves manufactured, used or sold any product or carried out any method which could be considered to be an infringement or contributory infringement of the patent here in suit.

17. Plaintiff has by its conduct in the United States Patent Office prior to the issuance of the patent in suit so limited the claims of said patent in suit that he is now estopped to charge any of defendants with infringement of any of the claims of said patent.

18. Because Plaintiff waited over 11-1/2 years to sue defendants for the alleged infringement of U.S. Patent No. 3,052,982, and despite plaintiff's prior knowledge of defendants' accused acts, defendants were led to believe that

plaintiff would not attempt to sue them for infringement of said patent and by reason thereof defendants changed their course of conduct and expanded their business, therefore, under the Doctrine Of Equitable Estoppel and Laches plaintiff's First Cause Of Action recited in the Complaint should be dismissed.

WHEREFORE, defendants pray that this Court dismiss the First Cause of Action of the Complaint and award defendants their costs, attorneys' fees and such other relief as this Court may deem just.

CERAMCO, INC., H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, and NORMAN LEVINE

By Harold E. Drumm

Harold E. Drumm
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Johnson & Johnson
New Brunswick, New Jersey 08903

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

BRIAN S. JONES, as Receiver
for PERMADENT PRODUCTS CORP.,

Plaintiff,

v.

CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE, and LEON L. COHEN,

Defendants.

Civil Action No. 74 C 467

"Before Judge Platt"

MOTION FOR RECONSIDERATION OF COURT'S DENIAL OF DEFENDANTS' PRIOR MOTION TO DISMISS THE FIRST CAUSE OF ACTION

Now come defendants and move this Court to reconsider its denial of defendants' prior Motion To Dismiss The First Cause Of Action in this matter.

The grounds for this motion are as follows:

The Court denied defendants' Motion To Dismiss The First Cause of Action on the ground that plaintiff had problems and difficulties in perfecting clear title to the patent in suit and had moved against defendants with reasonable dispatch since his title had been perfected and that therefore there was no laches or equitable estoppel as to the First Cause of Action. In denying defendants' motion the Court apparently was not fully apprised that neither plaintiff nor any of his assignors had given any notice of infringement to defendants from the date the patent in suit issued (September 11, 1962) until the Complaint in this suit was served (April 9, 1974) and that therefore under the law laches and equitable estoppel bar plaintiff

from any relief and furthermore based on the allegations in the Complaint and documents filed by plaintiff in opposition to defendants' motion as well as additional documents filed herewith, it is clear that plaintiff was as aware in 1962 as it was when it filed the Complaint herein as to defendants' accused activities. Also, under the law plaintiff had not only the right but the duty to assert the patent in suit against defendants many years ago even if his title to the patent was not fully clear.

Defendants' brief in support of this motion is attached hereto.

Respectfully submitted,

MORGAN, FINNEGAN, DURHAM & PINE

By _____

John C. Vassil
345 Park Avenue
New York, New York 10022
(212) 758-4800
Attorneys for Defendants

Of Counsel:

Don K. Harness
Harness, Dickey & Pierce
1500 N. Woodward Avenue
Birmingham, Michigan 48011
(313) 642-7000

Herbert I. Sherman
Office of General Counsel
Johnson & Johnson
New Brunswick, New Jersey 08903

EXHIBITS ANNEXED TO FOREGOING MOTION

EXHIBIT C - ARTICLE ENTITLED "PORCELAIN VENEERS BONDED TO PRECIOUS METAL CASTINGS"

(2) immediate filling of the three canals,

(3) excision of the palatal root (where it joins the crown) with a fissure bur,

(4) packing of the area with surgical pack for two weeks, and

(5) reduction of the lingual bulk of the crown to permit a measure of tissue massage to be supplemented by after-meal "gum brushing".

Figure 1 from the first case shows the three canals filled and the area of osteitis around the apex of the palatal root.

Figure 2 shows the area a month after excision of the palatal root. The second molar was removed because it was grossly extruded due to the loss of the lower second molar fifteen years before.

Figure 3 from the second case also shows radiolucency at the apex of the other palatal root. In this case, because the patient reported suppuration for over eight years, the palatal root was excised first to examine the bone covering the lingual surfaces of the buccal roots. It appeared adequate and so the two buccal canals were filled at once. Because the apex of the mesio-buccal root could be reached with a No. 2 file only, the file was resterilized, dipped in canal cement, forced into place and the end twisted off to remain as the apical filling of the canal.

Figure 4 shows the area four months after excision.

In both cases, the transition from the purulent, tender, swollen, hyperaemic tissue that surrounded the removed roots to the firm, pink, stippled mucoperiosteum covering the palatal bone of the buccal roots was a gratifying sight.

208 Medical-Dental Bldg.

Porcelain Veneers Bonded to Precious Metal Castings*

JOHN F. JOHNSTON, D.D.S., F.A.C.D.**, *Indianapolis, Indiana*

Bonded porcelain veneers, exclusive of the porcelain bridges fabricated around platinum alloy frames, have been used and accepted by the dental profession for approximately five years, although as long ago as 1903 a short-lived technique[1] was introduced. Developed as a replacement for resin veneers, they have been highly satisfactory in some respects, partially successful in others, and frustrating to the rank and file of the profession and to many of the technicians. In 1959, Lyon, Cowger, Woychowsky and Miller[2] concluded that all available gold-porcelain systems have inherent weaknesses which limit their application. That conclusion is true today.

Restricted application has been due in part:

[1]Porson, made by Kalodent; special 1900°F. gold supplied by Aderer Company.

*Paper delivered at the Biennial Refresher Course, Faculty Dentistry, University of Alberta, Sept. 8-9, 1960.

**Professor and Chairman, Dept. of Crown and Bridge and Partial Denture Prosthodontics, Indiana University School of Dentistry.

a) to individual manufacturers groping for the impossible instead of resources being pooled to effectively carry on adequate research;

b) to the recent almost-universal use of resins which seemingly made it unnecessary to train dentists and technicians in the intricacies of ceramic techniques;

c) to the reluctance of dentists and technicians to concentrate on learning how to handle and cope with the vagaries of the materials;

d) to the disappointments engendered by over-zealous advertising and promotion conducted by some laboratories and manufacturers; and

e) to the supine aceptance of inept workmanship by an alarmingly large segment of the profession.

In the preface of his text, "Partial Denture Construction," McCracken[2] says:

" . . . as long as the technician accepts inadequate material from the dentist, and the dentist is willing to place an inadequate product in the patient's mouth, the quality of removable prosthetic appliances will continue to be, as it all too frequently is, a far poorer service than the dentist and the technician together are capable of rendering."

This statement applies equally well to veneered crowns and bridges, whether the veneer be resin or bonded porcelain. (Resin veneers, used with some discretion and fabricated with [illegible] have given and continue to give admirable service. They should not be subjected to scorn even by the faddist or the unwilling worker.)

In December of 1955, Brecker[3] gave a clinic before the Greater New York Academy of Prosthodontics, in which he showed a technique for firing porcelain onto a special gold alloy (NuDent). In February of 1956, a clinic was presented before the American Academy of Restorative Dentistry by Johns[4] and Dykema,[1] who used a combination of materials (Ney) different from that displayed by Brecker. At about this same time, another technique (Permadent) was brought [illegible] this one employing an [illegible] fusing alloy and a high fusing porcelain.

Prior to these clinics, a considerable number of restorations made from this combination, both single-unit and [illegible] bridges, had been placed in the mouth. It is believed that the first single bonded porcelain veneer crown fabricated from materials with which relative balance had been achieved, was placed on an upper lateral incisor early in 1956 and in July 1960, even though it had been stained with a check in the veneer, it was still in the mouth, intact.

All of these materials were tested in some manner in a number of schools by the Bureau of Standards, and by other testing companies. These tests were designed to show:

a) comparative strength of the porcelains employed,

b) adequacy of the bonding (whether mechanical or chemical),

c) resistance to corrosion in the oral environment,

d) fit of the castings,

e) resistance of the alloy to deformation and

f) reactions in the mouth fluids.

Of the three alloys referred to, [illegible] manufactured by the J. M. Ney Company could be cast to any desired fit by using equipment ordinarily found in the dental office laboratory. The other gold alloys required a hotter flame and special investments, and it was more difficult to cast to a predetermined fit. The extremely high fusing alloy was not adaptable to the techniques or equipment which could be placed in the dental office and consequently was sold to and used by [illegible] laboratories only.

The author has been privileged to examine many crowns and bridges cast with high fusing Permadent alloy, both in-the-mouth, and has found routinely that these castings did not fit. Whether this was owing to faulty technique or to characteristics of the alloy and/or the investments, is not known.

The solders which were designed to be used with these alloys were of necessity made with altered percentages of gold with no base metals. They were sluggish, oxidized easily, and were quite exasperating to use. The joints produced were frequently faulty.

The Ney alloy (Ney-Oro P-9) and porcelain are still available but both the formula of each and the fusing and firing ranges of the alloy and porcelain may be altered. There is assurance, however, from responsible persons connected with that company that they do not anticipate withdrawing from the bonded porcelain veneer field. The integrity of the J. M. Ney Company makes this good news.

The NuDent alloy and porcelain are available now through only two or three commercial laboratories. The Permadent Company, following some radical changes in both alloy and porcelain, is in recess at the present time or out of business.

Probably the most popular technique today, at least in the eastern half of the United States, is that which uses Ceramco porcelain on an alloy manufactured by both the J. M. Jelenko and Aderer Companies. Ceramco porcelain is being produced by a group of men formerly associated with the Permadent Company. The alloy (Ceramco No. 1), developed through research conducted by these same men, in association with Jelenko and Aderer, is compatible with the porcelain; that is, their coefficients of expansion are in balance with slight, predetermined excess in the alloy.

Two high palladium-content alloys, and accompanying porcelains, are known as Ceramicast and Microbond. These alloys require special equipment for fusing and casting, and the porcelains which bond to them are in the high fusing or near-2400° range. Once again the major problem is one of making castings which fit. Also, the grey colour of the alloys is not pleasing.

Ticon, a chrome-cobalt alloy developed by the Ticonium Corporation, is being advocated for use with several porcelains. The author has seen no castings or restorations made using this material.

At Indiana University, 4½ years were spent doing clinical and laboratory research on the Ney product. These conclusions[6] were reached:

(1) that it could be cast to any type of fit which the operator desired by using cristobalite and control powder investments and a gas and air blowpipe.
(2) in the testing laboratory and in the mouth, it demonstrated the physical properties of a type "C" crown and bridge gold.
(3) it could be polished to a very high lustre.
(4) it did not tarnish readily.
(5) soldering is not easily accomplished.
(6) the bonding was predominantly chemical.
(7) if a vacuum-fired veneer is to be built, castings of Ney P-9 gold should be degassed, either by heat or by vacuum, at a temperature 50 to 100° above the fusing point of the porcelain. The oxide on the surface to be veneered can be removed without contamination.
(8) rigidity of the metal is mandatory.

Again in the testing laboratory, this porcelain showed a little better, although not significantly better, results. Bonding was particularly good, even when tested with radioactive isotopes. Only when the firing was done in a vacuum furnace was there any evidence of penetration.[6]

The Ney porcelain is a low fusing porcelain, with many of the advantages, as well as the disadvantages, of such a material. Handling characteristics are average. Shading has been a problem—still is to a lesser degree—and there continue to be occasionally some inconsistencies in the results. It is now felt that these inconsistencies are due, to some extent, to the porcelain itself which seemed to vary slightly from jar to jar, and also that the fired pigments in the opaques are erratic and sometimes there is some staining from the copper oxide which develops on the metal.

These idiosyncracies could be overcome or prevented, for the most part, when one has used the materials long enough or frequently enough to understand their requirements. To date, we have produced something short of 1,000 veneered units, many of which we consider most complementary to their environment. Clinically most of these have been placed in anterior segments, bicuspid to bicuspid, some between natural teeth, and they satisfy almost all aesthetic demands. There have been numerous cases, however, although on a percentage basis this is not high, where we have been unable to produce a veneer which was in harmony with the teeth on each side.

The greatest criticism of the Ney-Oro porcelain veneer has been its lack of "life," or its lack of translucency, a quality not inherent in the low fusing porcelains employed in bonding techniques. Some have a faint degree of iridescence, but translucency as yet does not seem to have been produced satisfactorily and consistently in the low fusing range. One might add that translucency in facings and restorations, the demand for which has been foisted on the profession by manufacturers of artificial teeth, is something which is grossly over-rated.

The staff at Indiana University School of Dentistry, has done some work with Ceramco and while some definite opinion has developed concerning these materials and this technique, it is too early to make conclusive statements. It was felt, however, that castings made from Ceramco alloy have a less predictable fit. This objection may have been overcome to a great degree by the introduction of a new casting investment (Ceramagold), but it is doubtful that the last word has been said on the subject. To date (August 1960), testing of this investment seems to have been most empirical.

Ceramco alloy castings must be soldered with caution. There is never more than 100° difference between the fusing range of the solder and the fusing range of the casting. An oxygen and gas blowpipe must be used. It is an extremely critical operation and the solder is very slow to run. A borax glass is used as a flux and is claimed by some technicians to serve as a wetting agent, facilitating the flow of the solder.

The author has seen very few good soldered joints; therefore, when using the Ceramco alloy in construction of a bridge or splinted units, it is advisable to cast the joints. These must be of such size and bulk (and the same idea applies to all of the frame) that practically total rigidity obtains.

When using the Ney-Oro porcelain veneer, it has been our opinion that the unsupported incisal edge is very superior to that which is backed up by a thin layer of metal.[3] We have felt, also, that bulk is essential to the longevity of this incisal edge.

Ceramco technicians maintain that bulk in their material is a drawback; that it reduces strength and that the thinnest possible layer of porcelain over the incisal edge and back onto the lingual surface produces the strongest veneer. The author is presently in no position to argue this and must accept their conclusions. With either material, the incisal edge should be built over rounded rather than sharp angles.

Unsupported insisal edges of Ney-Oro porcelain have been in mouths for almost six years with a minimum of breakage. So far as we know, none have broken. Ceramco veneers have been tested clinically for approximately 18 months, but no report has been made available on the number of fractures.

Ney-Oro opaques are made in several shades, none of which are considered completely desirable when correctly fired, none of which seem to have maintained true shade at the completion of the firing needed for building a veneer. For the best shading experience with Ney-Oro porcelain, a very light cream or a white opaque should be used, all shades then being developed and standardized with this background.

Ceramco opaques come in a variety of shades, also, each of which has been assigned to a group of shade formulas developed for this technique. A much greater bulk of opaque is used than with the Ney technique, and application is made to a surface which has been roughened by a stone. This is in contrast to the surface of the Ney c[illegible]ng which should be smooth and burnished with a dull bur.

The research departments at the Jelenko and Aderer Companies have stated:

(1) that the surface which has been ground with a heatless stone has almost twice the area of the smooth surface, and

(2) (with which the Dentists' Supply Company concurs) that undercuts are responsible for the adherence of the porcelain to the metal and aid in the microscopic compression which results from the different coefficients of expansion in the alloy, the opaque, and the porcelain.

While there is a difference in the thickness of the opaque layers, there is a great similarity in the bulk of porcelain required to produce a satisfactory shade.

With exception of the Ney porcelain veneers, there has been a considerable amount of checking and cracking within the body of the bonded porcelains. This probably can be attributed to one of several causes.

1. There has not been a balance between the coefficients of expansion of the porcelain and the metal;
2. There has been too rapid heating in the 200 to 400 degree temperature climb of the applied unfused porcelain, and there may have been too rapid cooling following removal from the furnace; or,
3. There could have been deformation of the metal framework.
4. There might have been an attempt to mix unlike porcelains; that is, porcelains with different grain sizes, seeking to bring about increased translucency.

In both clinical and laboratory use, the Ney porcelain and alloy have seemed to be ideally balanced, because, using ordinary care, checking has been minimal. The same seems to have been true of the NuDent.

High-fusing Permadent porcelain checked invariably. Whether the resultant fracturing of the veneers was due to this initial checking or to deformation of the metal is difficult to say, but accident alone would not have been responsible for the abnormal rate of fracturing.

The Ceramicast and Microbond veneers, which the author has seen, upon very close inspection almost always have shown multiple checks. Since these were made in franchised laboratories, it is impossible to determine how carefully they were handled, but it would seem there must be some discrepancies in the balance between the porcelains and the alloys.

Reports indicate that, when first introduced, Ceramco porcelain and alloy were prone to checking. It is claimed, and is no doubt true, that ideal balance has been achieved between the porcelain and the alloy with the new improved Ceramco No. 1 gold, although recognized investigators have not yet done enough clinical work to substantiate this statement.

One further addition to the field of porcelain bonded to metal might be mentioned before discussing the casting and firing techniques.

The Dentists' Supply Company has developed and is preparing to market a new pontic which they call Pontifab. This all-porcelain pontic is bonded to a core of metal quite similar in its characteristics to the metal used in the Ceramicast technique. These pontics are ground to alignment and adaptation to the ridge and are joined together with a relatively low fusing solder. (Any acceptable solder in the 18 or 20 carat range will suffice.)

If well adapted to the case at hand, all of the pontic contacting the ridge and all of the pontic which occludes with the opposing teeth will be porcelain. It is feasible to reglaze these pontics after they have been contoured and aligned, provided the firings do not exceed 1800°F, but,

because of the type of solder used, they cannot be refired after the bridge has been assembled.

Claim is made by The Dentists' Supply Company that the quality and density of the porcelain make it possible, in use with a material which they have developed, for the ground porcelain surfaces to be polished to an adequate tissue-contacting surface. This calls for further investigation and reflection.

Inasmuch as Ceramicast, Microbond, NuDent, and Goldpor techniques are used almost exclusively by commercial franchised laboratories, this discussion of techniques will be confined to the Ney and Ceramco materials.

The Ney-alloy fuses at approximately 1930°F while the Ceramco metal (either Jelenko or Aderer) has a fusing temperature of 2150°F and a casting temperature of 2300°F.

The Ney P-9 gold can be cast into a cristobalite and control powder mould. Ceramagold investment, manufactured by the Whipmix Corporation, is suggested for Ceramco. A Jelenko Thermotrol is recommended for casting either alloy.

The form of the framework for the Ney veneers differs slightly from that advised for the Ceramco. A shoulder and a right angle butt joint are required for Ney; a champhered finishing line for Ceramco.

The Ceramco veneers which have been observed had shade discrepancies close to the finishing line of the porcelain unless the veneer was over-contoured. The majority of their demonstration models are oversize, thus lending themselves to use of a bulk of porcelain which would not be possible or feasible in the usual clinical case.

The surfaces of the castings to be veneered differ radically. The Ney metal is not polished, but instead is brought to a semi-shine with a dull bur. The Ceramco metal is ground with a heatless stone, producing a surface which is definitely rough. It is then degassed and the surface to be veneered must not be touched. Slight oxidation occurs. An oxide is produced on the surface of the Ney alloy during the firing of the opaque, and it is through this oxide that bonding is accomplished, or at least greatly facilitated. While an oxide appears on the surface of the Ceramco metal, it is somewhat meagre and it does not change the colour of the gold materially. The manufacturers claim that some chemical bonding occurs with the formation of this oxide but that the major factor in the retention of the Ceramco veneer is mechanical and that it is helped by the rough surface resulting from grinding with the heatless stone, and that it is further embellished by the compression resulting from the greater contraction of the alloy.

Opaques are applied and condensed in a similar manner, but the layer used with Ceramco is heavier. The initial firing of the Ney opaque should not be above 1440°F. because, with the added firings which must occur in building up the veneer, there is some danger of overfusing, with the resultant loss of shade or a change of shade. This has been an important contributing factor in the confusion regarding shade results. The Ceramco opaque is fired until it has a shiny appearance, which occurs at approximately 1800°F.

The veneers are added in approximately the same way, although the Ney porcelain inexplicably will tolerate greater vibration than will the Ney. With either veneer, the idea is to condense the porcelain and eliminate moisture. Ney porcelain fires at 1650°F, Ceramco at 1800°F.

There should be no direct contact between the Ney porcelain and the alloy because the copper oxide which is produced on the surface of the alloy as it is heated in the furnace will stain the porcelain green. This can be avoided by extra contouring the opaque and by the proper shaping of the casting. While there may be a minute green line under any circumstances, it need not be visible.

Since the Ceramco alloy contains no copper, porcelain can contact it [illegible]

this type of mishap. Because it is claimed that the opaques used in the Ceramco technique augment shading, extremely thin layers of porcelain can be built at the margins of the veneer. Once again this is an assertion which has not been sufficiently substantiated.

Incisal shades of Ney and Ceramco porcelain seem to be radically different. During our investigations at Indiana University School of Dentistry, we used some samples of experimental incisal porcelain, provided by the Ney Company, which were more than amply translucent. Contrary to Ney's advice not to use them in the construction of clinical cases, inasmuch as they were not in balance with the body porcelain, we did use them in quite a number of clinical cases with excellent results both as to resistance to breakage and to increased facility in shading. For some reason unknown to us, these were not marketed nor were more such samples available.

One Ceramco incisal is reputed to be almost completely translucent. It is used as a blending powder rather than a straight incisal.

If a Ney veneer is placed in the furnace more than four times, the technician can usually expect trouble, that is, loss of shade or over-firing. The Ceramco Company claims that its porcelain can be taken to the furnace as many as eight times without deleterious results. But anyone doing this should be a highly experienced ceramist.

The author has seen many Ney veneers in the mouth. He has seen several — possibly as many as forty — Ceramco veneers in the mouth. In shade matching and in natural appearance, there may be a little advantage on the side of Ceramco. He has been told by technicians who have made many more Ceramco veneers than we have made that shading is more predictable with Ceramco porcelain. This may be true; on the other hand, these opinions may be fostered by differences in standards.

Further work will be done on both the alloys and the porcelains for this type of dental restoration and undoubtedly in the very near future there will be great improvements. Considering the advantages in resistance to wear and fracture, in gold stability, and in its application to adverse situations — all of which features the porcelain veneered gold casting can boast, without question[10] — it is to be hoped that those in a position to do so will expend every effort toward attaining these objectives.

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1121 West Michigan Street.

EXHIBIT D - COMPLAINT IN ACTION ENTITLED JONES v. COUNTY DENTAL PORCELAIN LABORATORY JA97

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF CONNECTICUT

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP.,

Plaintiff,

vs.

COUNTY DENTAL PORCELAIN LABORATORY, a partnership; WALTER GEITLER, JOHN GUGGERS, GEORGE ABRACH, individually and as partners of COUNTY DENTAL PORCELAIN LABORATORY

Defendants

Civil Action No.

B-74-2

COMPLAINT

JURISDICTION

1. This is a civil action for patent infringement and unfair competition, of which this Court has jurisdiction and venue under the provisions of Title 28, United States Code, Sections 1338 and 1400. The action arises, in part, under the patent laws of the United States and is brought pursuant to Title 35, United States Code, Sections 271 and 281, for infringement of United States Letters Patent No. 3,052,982, entitled "FUSED PORCELAIN-TO-METAL TEETH", M. Weinstein et al, Inventors, issued September 11, 1962.

PARTIES

2. Plaintiff, Brian S. Jones, of 26 Court Street, Brooklyn, New York 11201, is a duly appointed court receiver by way of an Order of the Supreme Court of the State of New

York on April 1, 1963, for Permadent Products Corp. (hereinafter "Permadent"), a corporation of the State of Delaware.

3. Defendant County Dental Porcelain Laboratory, upon information and belief, is a partnership comprised of the defendants Walter Geitler, John Guggers and George Abrach, having a principal place of business at 53 East Avenue in Norwalk, Connecticut 06851. County Dental Porcelain Laboratory and each of the partners jointly and severally purchase materials from Ceramco, Inc., a Corporation of New York, for making fused porcelain-to-metal teeth and have been and are engaged in making such teeth in violation of the rights granted under said patent 3,052,982. The materials manufactured, sold and distributed by Ceramco are specifically for use by assemblers, such as County Dental Porcelain Laboratory, in the making of fused porcelain-to-metal teeth. Upon information and belief, the materials manufactured, sold and distributed to County Dental Porcelain Laboratory by Ceramco in the State of Connecticut are assembled in the State of Connecticut and the acts of infringement herein complained of have taken place and are taking place within the District of Connecticut.

4. United States Letters Patent No. 3,052,982 entitled "FUSED PORCELAIN-TO-METAL TEETH" was duly and legally issued to M. Weinstein et al on September 11, 1962, on an application filed October 15, 1959, by M. Weinstein et al. Plaintiff, Brian S. Jones, as receiver for Permadent is the sole owner of said patent by an assignment from Permadent dated June 14, 1971, Permadent being the assignee from Weinstein by mesne assignments.

5. Upon information and belief, defendants jointly and severally have directly infringed and are infringing one or more claims of plaintiff's patent 3,052,982 by assembling, manufacturing, and otherwise making fused porcelain-to-metal teeth and by selling the same in this judicial district, as well as elsewhere in the United States of America.

6. Plaintiff has suffered damage by reason of defendants infringement of the aforesaid United States Letters Patent and will suffer additional irreparable damage unless defendants are enjoined by this Court from continuing to infringe said patent.

7. Upon information and belief, defendants have prior knowledge and notice of the patent-in-suit.

RELIEF REQUESTED

WHEREFORE, Plaintiff prays:

A. That this Court issue an injunction restraining defendants, its officers, servants, agents and employees and all other persons in privity therewith from infringing United States Letters Patent No. 3,052,992;

B. That this Court issue an injunction restraining and enjoining defendants from continuing to manufacture any materials used in the construction of an artificial tooth resembling that of Permadent;

C. That an accounting to the plaintiff for damages resulting to the plaintiff from defendants' infringement of said patent 3,052,982, and an accounting for any profits ob-

tained by the defendants' wrongful use of the above information, be made;

D. That the plaintiff be awarded litigation costs, expenses and attorney's fees;

E. Any other relief which the Court may deem necessary, proper and just.

Dated: Bridgeport, Connecticut
Jan. 2, 1974

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EXHIBIT E - EXCERPTS FROM PLAINTIFF'S ANSWERS TO FIRST INTERROGATORIES JA101

IN THE UNITED STATES DI. :ICT COURT
FOR THE DISTRICT OF CONNECTICUT

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP.,

Plaintiff,

vs.

COUNTY DENTAL PORCELAIN LABORATORY, a partnership; WALTER ZEITLER, JOHN GUGGEIS, GEORGE ABRACH, individually and as partners of COUNTY DENTAL PORCELAIN LABORATORY,

Defendant

Civil Action No.

B-74-2

PLAINTIFF'S ANSWERS TO FIRST INTERROGATORIES OF DEFENDANTS

Interrogatory No. 38: Describe in detail any information based on first-hand knowledge of facts which were known to and relied on by the Plaintiff in framing paragraphs 5 and 7 of the Complaint.

Answer: John Weber's intimate and longstanding involvement in this field.

Interrogatory No. 44: Describe fully how any physical properties or amounts of constituents set forth in answer to Interrogatory No. 43 were obtained.

Answer: Same as answer to 38 above.

June 19, 1974

RUBENS & BERGER

By _____

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IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF NEW YORK

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP., Plaintiff, v. CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN, Defendants.	CIVIL ACTION NO. 74 C 467 BEFORE JUDGE PLATT

STATE OF NEW YORK)
) ss.
COUNTY OF QUEENS)

AFFIDAVIT

H. GORDON PELTON, being duly sworn, deposes and says:

1. I am the H. Gordon Pelton who is one of the individual Defendants in the above identified civil action, and I am also the President of Ceramco, Inc., the corporate Defendant in the above identified civil action. I am one of the founders of Ceramco, Inc., and I have been President since its inception in 1959. I was President on September 11, 1962, the date when the Weinstein et al. U.S. Patent 3,052,982 (which is the patent involved in this suit) issued.

2. I have checked the records of Ceramco, Inc., and have consulted with other employees of Ceramco, Inc., (including Irving Klaus, John H. Leatherman, and Norman Levine who are

named as individual Defendants and who are or were employees and officers of Ceramco, Inc.) and I can find no record of (nor any recollection of) any actual notice or charge of infringement of U.S. Patent 3,052,982 ever having been received by Ceramco, Inc. or any of its employees from the Plaintiff, Brian S. Jones, or from Permadent Products Corporation, or from anyone else prior to the filing of the instant lawsuit in April 1974.

H. Gordon Pelton

Sworn and subscribed before me
this 1st day of November, 1974.

Notary Public

PHYLLIS KORNICKER
Notary Public - State of New York
No. 30-[illegible]
Qual. Filed in Queens County
Commission Expires [illegible] 1975

My commission expires:

Seal

DONALD L. WELSH, A. SIDNEY KATZ, and FITCH, EVEN, TABIN & LUEDEKA, all of Chicago, Ill., for plaintiff.

GEORGE W. HAMMAN, DANIEL B. PINKERT, and MAYER, BROWN & PLATT, all of Chicago, Ill., for defendant.

McGARR, District Judge.

This is a suit for patent infringement brought pursuant to Title 35, U.S.C. Section 281, seeking injunctive relief and damages. An amended complaint has been filed by the plaintiff, Grigsby Barton, Inc., alleging inducement to infringe, as well as infringement by sale, on the part of the defendant, Lincoln, Hodges & Associates, Inc. The defendant has filed a motion for summary judgment, which motion is before the Court.

The basis of the motion for summary judgment is the fact that the defendant is a manufacturer's representative who merely solicits orders for the patented devices which the manufacturer may either accept or reject. If the order is accepted, the manufacturer makes delivery directly to and receives payment directly from the consumer and not through the defendant. The customers receive title directly from the manufacturer and not through the defendant. The defendant assumes the position that these activities do not constitute either infringement or inducement to infringe.

The plaintiff, on the other hand, maintains that the activities of defendant went far beyond mere solicitation of orders. Defendant transmitted quotations to numerous customers for the patented devices which were in fact filled by the primary alleged infringer, Electrol, Inc. Defendant dealt directly with its customers' engineers. Defendant was in many instances in direct competition with plaintiff for various accounts. It is apparent that defendant knew that plaintiff was its direct competition as is evidenced by correspondence between defendant and the alleged primary infringer (Plaintiff's deposition, Exhibit 2-37). The plaintiff would have the Court hold that these activities constitute infringement by sale as well as active inducement.

[1] The activities of defendant do not constitute infringement by sale. Such activities have been analyzed in this Circuit and the Court has held that solicitation of orders is not enough to constitute infringement by sale. Knapp-Monarch Co. v. Casco Products Corp., 342 F.2d 622, 145 USPQ 1 (7th Cir., 1965); Knapp-Monarch Co. v. Dominion Electric Corp., 365 F.2d 175, 150 USPQ 489 (7th Cir., 1966).

These cases, however, have held that there is no active inducement under 35 U.S.C. Section 271(b) only because the manufacturer's representative had no knowledge of the patent being infringed. In the instant case, there is some dispute between plaintiff and defendant as to whether the statements and depositions of defendant's company personnel reveal knowledge that Electrol, Inc. was infringing plaintiff's patent. The Court is of the opinion that there is a contested factual issue.

In order to grant a motion for summary judgment, this Court must be convinced that there exists "* * * no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law * * *." F.R.C.P., Rule 56(c). As to the paragraph alleging infringement by sale as defined in Title 35 U.S.C. Section 271(a), there is no factual issue. The defendant clearly was not engaging in any activity which would constitute sale. As to the paragraph alleging inducement to infringe as defined in Section 271(b), there is the contested issue as to whether or not defendant had knowledge of the alleged infringement. Therefore, defendant's motion for summary judgment is granted as to the issue of infringement by sale and denied as to the issue of inducement.

District Court, N. D. Illinois, E. Div.

TECHNITROL, INC. v. MEMOREX CORPORATION et al.

Nos. 70 C 2916, 71 C 1082

Decided May 17, 1974

PATENTS

1. Laches — As to litigation (§44.10)

When delay in prosecuting claim for patent infringement appears unreasonable, burden is on patentee to excuse it; in patent cases, burden is placed on plaintiff after a six year period has passed; injury to defendant is presumed and plaintiff must justify delay.

2. Laches — As to litigation (§44.10)

Doctrine of laches may apply in patent infringement action even though only damages are sought inasmuch as patent expired before suit was filed.

3. Laches — As to litigation (§44.10)

Delay of 15 years in bringing infringement action requires its dismissal for laches where defendant, which relied on plaintiff's inactivity, was harmed by the delay; during this period, there were only sporadic at-

tempts at negotiation, followed by long periods of inaction.

4. Laches — Excuses for delay (§44.20)

Lack of funds is not a sufficient excuse to justify unreasonable delay in bringing patent infringement action; also, existence of other litigation does not provide an automatic excuse for delay; it is insufficient that plaintiff believed that the industry knew that pending litigation would stay any other litigation; further, it is no excuse that defendant was a good customer, whose business plaintiff did not want to lose.

5. Costs — Attorney's fees (§25.5)

In order to be an "exceptional case" under 35 U.S.C. 282, case must not be an ordinary one and plaintiff's activities must be unconscionable or inequitable; purpose of statute is to prevent gross injustice; courts usually look for deliberate falsity; awards are made in court's discretion; attorney's fees are refused where action is dismissed for laches in delaying infringement action for 15 years since plaintiff had not merely remained silent and then attempted to gain, but had been engaged in some litigation and licensing with others; refusal of fees is especially warranted since defendant did not raise issue when suit was brought four years before its dismissal.

6. Laches — As to litigation (§44.10)

Courts apply doctrine of laches to an entire industry where patentee remained silent as to its rights with respect to an entire industry and permitted widespread infringement.

Particular patents—Data Storage

2,611,813, Sharpless and Eichert, Magnetic Data Storage System, laches found as to one defendant but not as to another defendant.

Actions by Technitrol, Inc., against Memorex Corporation and The National Cash Register Company for patent infringement. On defendants' motions for summary judgment. Motion by The National Cash Register Company granted, motion by Memorex Corporation denied.

S. C. YUTER and YUTER & FIELDS, both of New York, N. Y., and ROBERT L. HARMON and HUME, CLEMENT, HUME & LEE, LTD., both of Chicago, Ill., for plaintiff.

ALFRED H. PLYER, JR., and PARKER, PLYER & MCEACHRAN, both of Chicago, Ill., for Memorex Corporation.

THEODORE W. ANDERSON and NEUMAN, WILLIAMS, ANDERSON & OLSON, both of Chicago, Ill., for The National Cash Register Company.

McLAREN, District Judge.

This matter is before the Court on the motions of the defendants, the National Cash Register Co. (NCR) and Memorex Corp. (Memorex), for summary judgment. For the reasons set forth below, NCR's motion is granted, and Memorex's motion is denied. This action is one for infringement of U. S. Patent No. 2,611,813 (Sharpless). Both defendants assert that the doctrine of laches bars this action. This motion calls into question the activities of the parties dating back over twenty years. The facts, as culled from affidavits and exhibits, provide an interesting insight into the development of the computer industry.

On September 23, 1952, the Sharpless patent was issued. It related to a magnetic data storage system whereby information was conveyed by electrical impulses from many remote terminals. The system would allow persons at the remote access terminals to insert or withdraw information. One purpose was to allow for storage of information concerning reservations on public carriers. Prior to the issuance of the patent, the defendant, NCR, through its predecessor, Computer Research Corporation (CRC), began marketing products, CRC 101 and 102, which plaintiff contends infringe its patent. NCR, after acquiring CRC, continued marketing the products.

On June 16, 1955, almost three years after the patent's issuance, Technitrol first attempted to license the patent to NCR. Prior to this, on March 4, 1954, NCR obtained an opinion from outside counsel that the CRC 101 and 102 systems did not infringe the Sharpless patent. On July 27, 1955, after some negotiations, NCR tentatively agreed to accept a license. However, this agreement was never consummated and on April 4, 1956, NCR declared that it was not then producing any infringing products (despite the fact that the CRC 101 and 102 systems were being produced) and had no present interest in a license. No further communication took place between Technitrol and NCR for two and one-half years.

On October 12, 1958, over six years from the patent's issuance, Technitrol again attempted to license NCR. Negotiations took place and a license was once again rejected. There were no further communications between NCR and Technitrol regarding a license from December 1958 until December 1963.

In December 1963, Technitrol once again sought to license NCR. NCR conducted some

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studies, reviewed its file and concluded that the patent was invalid. In June 1964, plaintiff's counsel wrote NCR and stated that he was desirous of receiving an answer to his proposal very soon. On October 13, 1966, NCR wrote Technitrol and denied any infringement and rejected the license offer. It did offer a possible cross-license in order to protect itself in any future product development. There was no further communication between the parties until April 1969.

In April 1969, Technitrol informed NCR of the pendency of a Court of Claims action against the United States Government, which it had begun in 1965. In May 1969, Technitrol informed NCR that it would be included as a class defendant in a proposed infringement action in Maryland. The class action was denied. The patent expired on September 23, 1969. Suit against NCR was filed on November 20, 1970.

While these events were occurring, other relevant events were taking place. The computer industry as a whole grew and developed. Technitrol followed this growth with a fairly successful licensing program of the Sharpless patent. IBM was licensed in 1954. Letters offering other licenses were sent out in 1955. Sperry Rand was licensed in 1962, General Electric in 1963, RCA, Burroughs and General Precision in 1964, and North American Aviation and Bunker Ramo in 1965.

In addition to the licensing program, Technitrol was involved in several lawsuits. The first suit, against Sperry Rand, was filed in October 1958, over six years after the patent was issued. That case was finally settled, with a license being issued in 1962. Next, the United States was sued in 1964, Control Data in 1966, Honeywell in 1967, and S.D.S. in 1968. In 1969, Technitrol attempted to establish a class action in the Control Data case. It was after this was denied that suit was brought against NCR in 1970, as noted above.

Other events also occurred during these years. NCR expanded its total gross sales in electronic data processing equipment from $3,366,004 in 1961 to $125,504,157 in 1971.[1] NCR developed various new systems, including the "315" in 1960, the "395" in 1964 and the "615" in 1968. Also, several people important to the litigation have died or are incapacitated. T. K. Sharpless, the co-patentee and inventor, died in 1967. NCR's principal outside counsel, John Hoxie, died in 1971. NCR's chief internal patent counsel, Louis Kline, who was involved in almost all of the negotiations, suffered a heart attack in 1972 and is incapable of testifying or participating in NCR's defense. Professor Howard Aiken, a pioneer in computer development and developer of certain important prior art, died in 1973. Further, records relating to early computer developments are no longer available.

[1] See Appendix A, attached. Appendix A is a summary report prepared by NCR and attached to its motion as Appendix B to its brief in support of its motion for summary judgment.

I.

The first question is whether summary judgment is appropriate. F. R. Civ. P. 56(c) provides, inter alia, that judgment should be rendered if "there is no genuine issue as to any material fact and * * * the moving party is entitled to a judgment as a matter of law." Also, the evidence should be construed in a light most favorable to the opposing party. The Court is aware that it is unusual to grant summary judgment based upon laches, a doctrine whose history is rooted in the ancient chancery practice; however, this Court believes that the evidence in this case is clear, that there are no genuine issues of material fact and that summary judgment is appropriate. See Continental Coatings Corp. v. Metco, Inc., 325 F.Supp. 165-66, 168 USPQ 685, 686 (N.D. Ill. 1971), aff'd, 464 F.2d 1375, 1377-79, 174 USPQ 423, 424-425 (7th Cir. 1972).

II.

In order to effectively assert the defense of laches, two elements must be present. First, there must be a lack of diligence on the part of the plaintiff. Second, there must be injury to the defendant due thereto. Baker Mfg. Co. v. Whitewater Mfg. Co., 430 F.2d 1008, 1012, 166 USPQ 463, 465-466 (7th Cir. 1970), quoting Rome Grader & Mach. Corp. v. J. D. Adams Mfg. Co., 135 F.2d 617, 619, 57 USPQ 442, 443-444 (7th Cir. 1943).

Mere delay is not sufficient; there must be disadvantage to another. Universal Coin Lock Co. v. American Sanitary Lock Co., 104 F.2d 781, 782, 42 USPQ 60, 61 (7th Cir. 1939), quoting George J. Meyer Mfg. Co. v. Miller Mfg. Co., 24 F.2d 505-507 (7th Cir. 1928).

[1] When the delay in prosecuting a claim appears unreasonable, the burden is on the patentee to excuse it. Baker Mfg. Co. v. Whitewater Co., supra, at 1009, 166 USPQ at 463-464. In patent cases, the burden is placed upon the plaintiff after a six year period has passed (this is analogous to the statute of limitations, 35 U.S.C. § 286). Id. at 1010, 166 USPQ at 464. Injury to the defendant is presumed and plaintiff must justify the delay. Id. In the instant case, the patent issued in September 1952, and suit was not brought until November 1970, a delay of 18 years. Plaintiff urges several reasons for the inapplicability of the laches doctrine and gives a number of excuses for the delay; however, the Court believes that the undisputed facts require grant-

ing of defendant NCR's motion as a matter of law.

[2] Plaintiff first asserts that laches is inapplicable in a patent action which seeks only damages for past harm, the patent having expired two years before suit was filed. It offers no cases in support of this proposition. Several courts have applied the doctrine of laches to patent actions where the patent had expired. See Whitman v. Walt Disney Prod., Inc., 263 F.2d 229, 230, 120 USPQ 253, 254-255 (9th Cir. 1958); Dock & Terminal Engng. Co. v. Pennsylvania R.R., 82 F.2d 19, 28 USPQ 314 (3d Cir. 1936). Courts have also applied the doctrine of laches to the portion of the case which sought retrospective relief. See, e.g., Baker Mfg. Co. v. Whitewater Mfg. Co., supra. The Court therefore believes that the doctrine of laches may be appropriate in the instant case. Cf. F. R. Civ. P. 8(e)(2); F. James, Civil Procedure §§ 8.2, 8.6 (1965); 2A J.Moore, Federal Practice ¶ 8.32, at 1892 (2d ed. 1974).

[3] There can also be no serious question that NCR has been harmed. First, there is the presumption of harm to the defendant after a six year delay. See Baker Mfg. Co. v. Whitewater Mfg. Co., supra at 1010, 166 USPQ at 464; see also General Electric Co. v. Sciaky Bros., Inc., 304 F.2d 724, 727, 134 USPQ 55, 57-58 (6th Cir. 1962); Whitman v. Walt Disney Prods., Inc., supra at 231, 120 USPQ at 255. In addition, the following uncontroverted events have taken place. NCR's investment and sales have increased many times, thereby resulting in its substantially changing its position. See, e.g., id.; Continental Coating Corp. v. Metco, Inc., 325 F.Supp. 165, 167, 168 USPQ 685, 686-687 (N.D. Ill. 1971), aff'd, 464 F.2d 1375, 174 USPQ 423 (7th Cir. 1972); see also Brennan v. Hawley Prods. Co., 182 F.2d 945, 86 USPQ 127 (7th Cir. 1950); Rome Grader & Mach. Corp. v. J.D. Adams Mfg. Co., 135 F.2d 617, 57 USPQ 442 (7th Cir. 1943); George J. Meyer Mfg. Co. v. Miller Mfg. Co., 24 F.2d 505 (7th Cir. 1928). Three key witnesses; the inventor, T. K. Sharpless; NCR's trial counsel, Hoxie; and an inventor of certain prior art, Aiken, have died. In addition, NCR's house counsel, Kline, is incapacitated. Many documents relating to the early development of computers have been destroyed or are missing. This certainly impairs NCR's ability to defend the action. See Brennan v. Hawley Prods. Co., 182 F.2d 945, 948, 86 USPQ 127, 130-131 (7th Cir. 1950); see also Gillons v. Shell Co. of California, 86 F.2d 600, 609, 32 USPQ 1, 9-10 (9th Cir. 1936).

Technitrol contends, however, that the delay was not a cause for harm and that NCR did not rely on Technitrol's inaction. First, this ignores the presumption of harm which exists under these circumstances. Second, it ignores the fact that NCR received an opinion in 1954 from outside counsel that its products were noninfringing. NCR has relied thereon throughout the entire period. Although it discussed licensing from time to time, it did so because of a desire to protect possible future developments and not to defend itself from a present infringement charge. After so many years had passed, with only several attempts to license, with no follow up, and with long intervals of silence, NCR must be deemed to have relied on Technitrol's inactivity.

III.

Technitrol offers several reasons for the delay. It first asserts that NCR lulled it into a position of non-action through its representations and therefore has "unclean hands." The record is to the contrary.

NCR (through its predecessor, CRC) had been producing its system prior to the date the patent was issued. From that date until June 16, 1955, no action was taken by Technitrol against NCR. Although NCR made a preliminary acceptance of a license, on April 4, 1956 it declared it was not infringing and had no present interest in a license. Technitrol, despite this clear notice, did nothing until October 1, 1958, two and one-half years later, when it again offered NCR a license. NCR again rejected a license and no further communication was had for five years, until December 1963. NCR re-examined the patent in terms of its products. Technitrol relies on an internal NCR memo, dated May 22, 1964, to support its position that NCR was considering a license. However, Technitrol did not see this memo or rely upon it at the time. Further, the memo clearly discusses the concept of a license under the Sharpless patent in a conditional sense, using "if" to predicate the discussion. In no sense could this memo or any other NCR document be considered as deceiving Technitrol or showing unclean hands. This also applies to a second internal NCR memorandum, dated June 29, 1964, which clearly states that NCR believed it never infringed and that NCR believed that Technitrol could not be convinced, despite any evidence, of the invalidity of the patent.

In October 1966, NCR sent a letter to Technitrol in which it stated again that it was not interested and did not believe the patent to be valid. However, in order to protect future lines, it was willing to explore cross-licenses. It reiterated this on November 21, 1966. Nothing further was heard from Technitrol for two and one-half years, until April 1969, when Technitrol wrote NCR and stated that its belief was that nothing had been done because of the United States government litigation. In May 1969, the attempted class action

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was begun. That failed and suit was brought against NCR in November 1970.

Technitrol asserts that NCR failed to inform it of its belief that the patent was invalid. There is no evidence to support this conclusion. NCR consistently told Technitrol that it was not infringing and did not want a license. What is present here are sporadic attempts to license, met with rejections, and followed by long periods of inactivity. Also, Technitrol warned NCR in June 1964, nine years after the first communication, that it wanted some response, "or else." Suit was not brought, however, until six years later. This case differs from cases such as Photon, Inc. v. Eltra Corp., 308 F.Supp. 133, 163 USPQ 165 (N.D. Ill. 1969), and Holland Co. v. American Steel Foundries, 95 F.Supp. 273, 87 USPQ 370 (N.D. Ill. 1950), where the total delay was only seven years and settlement negotiations were continuously taking place. In the instant case, the undisputed facts disclose that there were only sporadic attempts at negotiation, followed by long periods of inaction. See Continental Coatings Corp. v. Metco, Inc., 464 F.2d 1375, 1376-78, 174 USPQ 423, 424-426 (7th Cir. 1972); see also Whitman v. Walt Disney Prods., 148 F.Supp. 37, 40, 112 USPQ 220, 221-222 (S.D. Calif. 1957).

[4] Technitrol next asserts that it was constantly involved in litigation and could only afford to maintain one suit at a time. Several preliminary facts should be set out. First, Technitrol did not sue anyone in the computer industry until 1958, over six years after its patent had issued and over three years after its first attempt to license all of the members of the industry. Second, after Technitrol filed suit against the United States government in April 1964, it was able to simultaneously maintain suit against it, Control Data (commenced in 1966), Litton (commenced in 1966), Honeywell (commenced in 1967), Collins (commenced in 1967) and Xerox (commenced in 1968).[2] In any event, a lack of funds is not a sufficient excuse to justify an unreasonable delay. See, e.g., Whitman v. Walt Disney Prods., 148 F.Supp. 37, 40, 112 USPQ 220, 221-222 (S.D. Calif. 1957), aff'd, 263 F.2d 229, 120 USPQ 253 (9th Cir. 1958).

Moreover, the existence of other litigation does not provide an automatic excuse for a delay. See, e.g., American Home Prods. Corp. v. Lockwood Mfg. Co., 483 F.2d 1120, 1123, 179 USPQ 196, 197-198 (6th Cir. 1973); Baker Mfg. Co. v. Whitewater Mfg. Co., 430 F.2d 1008, 1014-15, 166 USPQ 463, 467-468 (7th Cir. 1970). Courts have upheld the defense of "other litigation" where there was either notice that there would be a delay pending the resolution of another suit or an agreement between the parties to that effect. See, e.g., Maxon Premix Burner Co., Inc. v. Eclipse Fuel Eng. Co., 471 F.2d 308, 312-13, 175 USPQ 324, 326-327 (7th Cir. 1972); Armstrong v. Motorola, Inc., 374 F.2d 764, 769, 152 USPQ 535, 537-538 (7th Cir. 1967); compare American Home Prods. Corp. v. Lockwood Mfg. Co., supra at 1123, 179 USPQ at 197-198. Technitrol asserts that its belief was that the industry knew that the Sperry Rand litigation would stay any other litigation. However, it offers nothing more than its belief. This is clearly insufficient. Furthermore, Technitrol's contention that the industry would await the outcome of the Sperry Rand litigation is inconsistent with its attempts to license NCR in 1958, which began almost simultaneously with that suit.

Technitrol never informed NCR that it would stay any action against it nor did it make a formal charge of infringement. Technitrol asserts, however, that the suit against the United States in the Court of Claims in 1964 served as notice to NCR since the government was NCR's customer. It should first be recalled that this suit was not commenced until 12 years after the patent's issuance. Also, there was no requirement on NCR to become a party, nor did Technitrol seek its joinder. See Boutell v. Volk, 449 F.2d 673, 677-78, 171 USPQ 668, 671-672 (10th Cir. 1971). NCR declined to take part in the suit, although it did offer the Government its validity study. This contention is also inconsistent with Technitrol's attempts to license NCR during the 1964-66 period, when, supposedly, it was in effect suing NCR. Technitrol never informed NCR that it would also be sued, or that suit against it would be delayed. In 1969, Technitrol attempted to explain a two and one-half year period of silence by stating that it believed NCR had not been in communication with it because of the Court of Claims suit. However, there is nothing to substantiate this belief. Also, NCR might have assumed that Technitrol was not serious inasmuch as other companies were being sued, and it had never received notice of this possibility. The Court therefore finds that the "other litigation" doctrine offers no excuse for Technitrol's delays.

Technitrol offers one final excuse for the delay. It asserts that NCR was a good customer and it did not want to lose its business. Courts have rejected this as a defense. See General Electric Co. v. Sciaky Bros., 304 F.2d 724, 727, 134 USPQ 55, 57-58 (6th Cir. 1962). Furthermore, it is inconsistent with Technitrol's claim that NCR was put on notice of an action against it because of the

[2] Technitrol, in its affidavits, claimed that its royalty fees were approximately equal to litigation expenses. This is not a sufficient showing of poverty nor does it meet the burden placed upon it.

Sperry Rand, Court of Claims and other litigation.

Technitrol also urges that NCR threatened it with a loss of business if it sued. It makes this claim in the affidavit of its President, Mr. Eichert, who claims that between 1966-1970 he received reports from his sales department that NCR would terminate its business if it sued. Mr. Yuter, Technitrol's counsel, claims in his affidavit that Mr. Eichert did not want to antagonize NCR because it was a good customer. But assuming that there were such threats in the 1966-1970 period, this does not justify the delay from 1952 to 1966. Moreover, it appears that the concern was Technitrol's, not NCR's. Finally, and most important, the claim of threats is predicated upon pure hearsay, "reports from the sales department." There are no written documents, no names of Technitrol employees receiving such threats, no dates when threats were made, and no evidence as to who made such threats. This is not the type of evidence upon which the Court can rely and plaintiff has failed to meet its burden. See F. R. Civ. P. 56(e); see also, Automatic Radio Co. v. Hazeltine Research, Inc., 339 U.S. 827, 831, 85 USPQ 378, 379-380 (1950); American Security Co. v. Hamilton Glass Co., 254 F.2d 889, 893-94, 117 USPQ 219, 221-222 (7th Cir. 1958).

In summary, the undisputed facts disclose that for 18 years Technitrol sat on any rights it had against NCR, to NCR's detriment. Accordingly, the Court will grant NCR's motion for summary judgment based upon laches.

IV.

NCR also seeks attorneys' fees based upon Technitrol's activities. 35 U.S.C. § 285 provides for attorneys' fees in "exceptional cases." NCR asserts that Technitrol's activities during the last twenty years [3] make this an exceptional case.

[5] In order to be an "exceptional case," it must appear that the case is not an ordinary one and plaintiff's activities are unconscionable or inequitable. See, generally, Apex Elect. Mfg. Co. v. Altorfer Bros. Co., 238 F.2d 867, 874, 111 USPQ 320, 324-325 (7th Cir. 1956). The purpose of Section 285 is to prevent gross injustice. Monolith Portland Midwest Co. v. Kaiser Aluminum & Chemical Corp., 407 F.2d 288, 294-97, 160 USPQ 577, 580-584 (9th Cir. 1969). Courts have usually looked for deliberate falsity. See, e.g., id.; compare L. F. Strassheim Co. v. Gold Medal Folding Furniture Co., 477 F.2d 818, 177 USPQ 673 (7th Cir. 1973), with Pickering v. Holman, 459 F.2d 403, 173 USPQ 583 (9th Cir. 1972). Awards are made in the court's discretion. Id. at 408, 173 USPQ at 586.

Two conflicting cases highlight the difficulty the Court faces in resolving this problem. In Brennan v. Hawley Prod. Co., 98 F.Supp. 369, 89 USPQ 209 (N.D. Ill. 1951), Judge Campbell, on remand, awarded attorneys' fees where the Court of Appeals had held that an action was barred by laches, when the delay was for 14 years. See Brennan v. Hawley Prod. Co., 182 F.2d 945, 947, 86 USPQ 127, 129-130 (7th Cir. 1950). In Briggs v. Wix Corp., 308 F.Supp. 162, 171, 163 USPQ 283, 290 (N.D. Ill. 1969), Judge Campbell, then Chief Judge, declined to award attorneys' fees, where the delay was for 19 years. Thus, the mere length of delay alone cannot be the basis for the award.

The Court believes that attorneys' fees are not appropriate here. First, there is not that quality of wilfullness that is required to make this an "exceptional case." Although plaintiff slept on its rights and did not meet its burden of explaining the delay, its activities in the period did not constitute merely remaining silent and then attempting to gain. It was involved in some litigation and it had licensed some parties. Furthermore, the facts constituting laches were present in 1970 when the case was filed and NCR must bear part of the burden for not raising the issue earlier and causing its attorneys' fees to increase. Attorneys' fees are therefore denied.

V.

Memorex seeks summary judgment under the theory of "industry laches." It has filed no affidavits or supporting materials; it relies merely on NCR's documents.

[6] Courts have applied the doctrine of laches to an entire industry where a patentee remained silent as to its rights with respect to an entire industry and permitted widespread infringement. See, e.g., Briggs v. Wix Corp., 308 F.Supp. 162, 163 USPQ 283 (N.D. Ill. 1969); Eastman Kodak Co. v. McAuley, 41 F.Supp. 873, 51 USPQ 165 (S.D. N.Y. 1941); compare Briggs v. M & J Diesel Locomotive Filter Corp., 228 F.Supp. 26, 141 USPQ 96 (N.D. Ill. 1964), aff'd. 342 F.2d 573, 144 USPQ 701 (7th Cir. 1965).

In the instant case, summary judgment would be inappropriate. First, fact issues as to Technitrol's relations with Memorex or other companies may exist. Second, no evidence has been presented showing either delay or particularized harm to Memorex.

[3] In addition to the aforementioned facts, NCR accuses Technitrol of utilizing delaying tactics in this Court. This is based upon a stay obtained in these proceedings while a stay was apparently requested in the Control Data litigation in order to allow this case to go forward. The Court does not believe that there is evidence that this was done wilfully or intentionally, nor does the Court believe that Technitrol has attempted to delay and obstruct these proceedings.

It is also evident that Technitrol did not sit by and allow industrywide infringement. It pursued a licensing program and also was involved in litigation. The Court has no information concerning when Memorex entered the industry, the knowledge it had of the Sharpless patent or of its relationship with Technitrol. For these reasons, Memorex's motion will be denied.

APPENDIX A

NCR Gross Sales Totals (Dollars) for Electronic Data Processing Equipment (EDP)

	Model 315 Systems	*Model 615 Systems*	*Total EDP*
1951 to 1960	Summary Data for the period 1951-1954 (Computer Research Corporation) and for the period 1954-1960 (National Cash Register) was not available at the time of filing this motion. If the court deems it necessary for a determination of this cause, the relevant data for the period 1951-1960 can be assembled also.		
1961			3,366,004
1962	722,706		12,371,465
1963	8,794,146		19,911,932
1964	17,752,376		31,309,564
1965	18,004,894		33,239,668
1966	23,606,541		43,263,636
1967	29,337,968		54,535,159
1968	34,736,399	27,414	64,934,749
1969	28,755,639	12,158,488	77,565,968
1970	28,649,447	38,664,993	101,310,858
1971	25,348,773	59,838,572	125,504,157

District Court, S. D. New York

HERBERT ROSENTHAL JEWELRY CORPORATION
v. HONORA JEWELRY CO., INC., et al.

73 Civ. 4865 Decided May 22, 1974

COPYRIGHTS

1. Infringement — Tests of (§24.209)

Test of copyright infringement is whether average lay observer would find a substantial similarity in designs; issue is decided by visual examination of designs.

2. Prior adjudication — New evidence or new issues (§56.25)

Barring circumstances arising subsequent to order adjudicating adequacy of copyright notice, parties should be precluded from relitigating this issue by doctrine of collateral estoppel.

3. Pleading and practice in courts — Motions — For summary judgment — In general (§53.6331)

Although defendants in copyright infringement action did not move for summary judgment, adequate authority exists to permit court, on denial of plaintiff's motion for summary judgment, to grant summary judgment to defendants dismissing complaint.

Action by Herbert Rosenthal Jewelry Corporation against Honora Jewelry Co., Inc., Jerry J. Grossbardt, and Stanley Schechter for copyright infringement. Complaint dismissed.

CHARLES SONNENREICH, New York, N. Y., for plaintiff.

POLLACK & SINGER and STEPHEN W. BERGER, both of New York, N. Y., for defendants.

BRIEANT, District Judge.

By its complaint filed November 13, 1973, plaintiff, a jewelry manufacturer (hereinafter "Rosenthal"), sues for damages, preliminary and permanent injunctive relief, and an accounting, arising out of claimed copyright infringement by defendants (hereinafter collectively "Honora") of its copyright design for a gold, jeweled turtle pin. Plaintiff also seeks destruction of the infringing pins, counsel fees, costs and other relief.

We have subject matter jurisdiction under 28 U.S.C. § 1338. All parties are present in this District. Defendants' answer denies copying, and pleads affirmatively that plaintiff failed to comply with the notice requirements (17 U.S.C. § 19), never acquired, or alternatively, has abandoned a valid copyright.

By notice of motion dated April 2, 1974, argued, and fully submitted on April 30, 1974, plaintiff seeks summary judgment in its favor, and a preliminary injunction. Both parties have been deposed.

Plaintiff and defendant Honora each make a turtle pin. A sample of each pin was received at the hearing on this motion. Prior to April 13, 1967, plaintiff had designed for it, by one Lindemann, a jeweled turtle pin made of 14 kt. gold, the back of which was adorned with a cluster of precious gems, including diamonds, rubies, emeralds and sapphires, and combinations thereof. A copyright registration was filed and issued to plaintiff on December 4, 1967. We assume for the purposes of this motion the validity of the copyright, and that plaintiff duly marked its turtle pins, and "has sold [in interstate commerce] hundreds of its

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF NEW YORK

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP.,

Plaintiff,

v.

CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN,

Defendants.

CIVIL ACTION NO. 74 C 467

Before Judge Platt

STATE OF NEW YORK)
) ss
COUNTY OF NEW YORK)

AFFIDAVIT

Peter L. Berger, being duly sworn, deposes and says:

1. I am the attorney in the above-captioned matter for plaintiffs and have reviewed the Affidavit of John Weber dated December 2, 1974.

2. The representations made by Mr. Weber as to the position this law firm took when it was requested they institute litigation is correct and we contacted U.S. Testing Laboratory of Hoboken, New Jersey and supplied them with a sample of CERAMCO porcelain for analysis.

3. The report was completed on April of 1973, and the analysis of the component parts of the CERAMCO porcelain indicated that Mr. Weber's suspicions as to the components in the porcelain was correct and his suspicion regarding the initial theft of PERMADENT components and the continuing use of the same

components and processes was also confirmed. Based upon the confirming of Mr. Weber's suspicions, this firm undertook to institute litigation based upon the patent-in-suit.

4. I have reviewed the Interrogatories in the Connecticut companion action entitled, Brian S. Jones,et al vs. County Dental Porcelain Laboratory,et al, Civil Action B-74-2 and confirm that the answers supplied to the Interrogatories are accurate in that the information which were known to and relied by plaintiff in charging infringement was John Weber's intimate and long-standing involvement in the field, which involvement and relationship was confirmed by the tests undertaken at the request of this office.

Peter L. Berger

Sworn and subscribed before me

this 2nd day of December 1974

Notary Public

MOLLIE HARTMAN
NOTARY PUBLIC, State of New York
No. 03[illegible]0110
Qualified in Bronx County
Commission Expires March 30, 19[illegible]

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF NEW YORK

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP., Plaintiff, v. CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN, Defendants.	CIVIL ACTION NO. 74 C 467 Before Judge Platt

STATE OF NEW YORK)
) ss.
COUNTY OF NEW YORK)

AFFIDAVIT

JOHN WEBER, being duly sworn, deposes and says:

1. I am President of PERMADENT PRODUCTS CORP. and have been in that position since the mid-1950s until the present.

2. The defendants in the above-captioned action were employed by PERMADENT PRODUCTS CORP., and during 1959, left PERMADENT to form CERAMCO CORP., defendant herein, the business of which directly competed with that of PERMADENT PRODUCTS CORP.

3. The above-named defendants occupied key positions with PERMADENT PRODUCTS CORP. and were intimately familiar with the technological components and processes used in making the porcelain which PERMADENT PRODUCTS CORP. sold and which was also sold in direct competition by CERAMCO, shortly after CERAMCO was formed.

4. From the time the defendants left Permadent, I suspected that they stole products and components which were used in the porcelain material sold by CERAMCO, those products and components being stolen from PERMADENT. In effect, they stole the entire technology for making PERMADENT fused porcelain-to-metal dental construction. I was also under the impression and suspicion that CERAMCO did not materially change the components or process of making the porcelain from the time they initially commenced business until the present, and believe that such continued actions represented an infringement of the patent-in-suit. At no time did I actually conduct tests to determine the components of the porcelain sold by CERAMCO, so that at no time did I have more than a mere suspicion that CERAMCO in fact was actually infringing the patent-in-suit and that the materials stolen and processes used at the inception of CERAMCO were materially the same as presently being used.

5. When the firm of Rubens & Berger was approached by Brian S. Jones in connection with filing a law suit, I realized that I had never conducted any actual analysis or studies to indicate that my suspicions were accurate. Mr. Peter L. Berger insisted that tests be conducted before the firm would undertake litigation. As a result of the tests, my suspicions were confirmed, and it was based upon my suspicions that the law suit was filed, although the suit would not have been filed unless my suspicions were confirmed by the tests conducted by the U.S. Testing Laboratory.

John Weber

Sworn and subscribed before me
this 2nd day of December 1974

Notary Public

MOLLIE HARTMAN
NOTARY PUBLIC State of New York
No. 03-4520110
Qualified in Bronx County
Commission Expires March 30, 197

MEMORANDUM AND ORDER OF PLATT D.J. DATED JANUARY 7, 1975

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

- -x

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP.,

Plaintiff,

-against-

CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN,

Defendants.

74 C 467

Memorandum and Order

January 7, 1975

- -x

PLATT, J.

Defendants have moved for reconsideration of this Court's Opinion denying defendants' prior motion to dismiss plaintiff's first claim for patent infringement on the ground that the same is barred under the doctrine of estoppel and laches. The facts and the bases for this Court's denial are set forth in an opinion reported in F. Supp. (July 24, 1974).

In their motion for reconsideration defendants claim that "the Court was not fully apprised that neither plaintiff nor any of his assignors had given any notice of an infringement to defendants from the date the patent in suit issued (September 11, 1962) until the complaint in this suit was served (April 9, 1974) and that therefore under the law laches and equitable estoppel bar plaintiff from any relief".

FPI—SS—3-17-72—30M—9153

In paragraph 13 of plaintiff's complaint, which was before this Court when it decided defendants' original motion, it is alleged that "upon information and belief, defendants have prior knowledge and notice of the patent-in-suit." It was only subsequent to its decision that the defendants suggested, and the parties thereafter agreed, that no notice was in fact ever given to the defendants by any of the claimants to the patent-in-suit (including the plaintiff) of any intention to enforce any patent rights.

This question was first presented to this Court in October, 1974, when the defendants requested the Court to modify its Opinion with a statement that its order involved a controlling question of law as to which there is substantial ground for difference of opinion and that an immediate appeal from an order entered thereon might materially advance the ultimate termination of the litigation pursuant to 28 USC § 1292(b).

Thereafter and before the Court made a determination with respect to such request for modification, the defendants made their present motion for reconsideration.

As indicated in its original opinion herein, the Court was "troubled by" the amount of time that elapsed (1962-1974) during which no action was taken against the alleged patent infringers and it was only because of the plaintiff Receiver's problems and difficulties in perfecting clear title to the patent-in-suit that the Court declined to dismiss the plaintiff's action on the ground of laches.

As indicated above, however, the Court in making such decision, was under the mistaken impression that "notice" had been given to the defendants that they were going to be held accountable eventually for their alleged infringement which now appears not to be the fact.

The more recent authorities seem to suggest that failure to give such notice may be fatal to a plaintiff's claim, such as the one in the case at bar, that he should be excused from the delay in the prosecution of his claim because of other substantial problems such as existed in this case. American Home Products Corp. v. Lockwood Manufacturing Co., 483 F.2d 1120 (6th Cir. 1973); Technitrol, Inc. v. Memorex Corp., 375 F. Supp. 828 (N.D. Ill. May 17, 1974); Siemens Aktiengesellschaft v. Beltone Electronics Corp., 381 F.Supp. 57 (N.D. Ill. Sept. 12, 1974).

In the American Home Products Corp. case the Court of Appeals said (483 F.2d at p. 923):

> "This is not to imply that the other litigation rule is applicable only by agreement between the parties; clearly it is not. See: 2 Pat.L.Pers. § B.3[2] at 10-11 (1972). But if Ekco had intended to press its claim after the Chicago litigation, it surely would have (or should have) found time to send Lockwood a simple letter to that effect.
>
> "This notification is important, partly because it puts the accused infringer on notice that a suit will be filed against him on this issue, and partly because it permits him to bring a declaratory judgment action if the delay in waiting for a judicial determination would be a burden upon his proposed operation.

FPI—SS—3-17-72—30M—9153

"[4] Although the 'other litigation' exception does permit a patent owner to sue multiple infringers consecutively, we are unable to find any authority for the proposition that the existence of 'other litigation' is a complete bar to the assertion of a laches defense. Although multiple litigation need not be maintained against multiple infringers, we see no reason why a patent owner need not at least assert to the other infringers its intention to bring a subsequent action at the termination of the presently pending action."

In the case at bar, according to the plaintiff's complaint the defendant CERAMCO's position has been substantially changed during the delay years in question in that it has been sold to Johnson & Johnson Corporation.

In addition, of course, the defendants enjoy a presumption of injury or harm by virtue of the extent of the delay herein. As was said in the Technitrol, Inc. case, supra, (376 F. Supp. at pp. 831 and 832):

"When the delay in prosecuting a claim appears unreasonable, the burden is on the patentee to excuse it. Baker Mfg. Co. v. Whitewater Co., supra, at 1009, 166 USPQ at 463-464. In patent cases, the burden is placed upon the plaintiff after a six year period has passed (this is analogous to the statute of limitations, 35 U.S.C. § 286). Id. at 1010, 166 USPQ at 464. Injury to the defendant is presumed and plaintiff must justify the delay. Id.

* * *

"There can also be no serious question that NCR has been harmed. First, there is the presumption of harm to the defendant after a six year delay. See Baker Mfg. Co. v. Whitewater Mfg. Co., supra at 1010, 166 USPQ at 464; see also General Electric Co. v. Sciaky Bros., Inc., 304 F.2d 724, 727, 134 USPQ 55, 57-58 (6th Cir. 1962); Whitman v. Walt Disney Prods., Inc., supra at 231, 120 USPQ at 255.

* * *

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"Technitrol contends, however, that the delay was not a cause for harm and that NCR did not rely on Technitrol's inaction. First, this ignores the presumption of harm which exists under these circumstances. * * *

* * *

"* * * After so many years had passed, with only several attempts to license, with no follow up, and with long intervals of silence, NCR must be deemed to have relied on Technitrol's inactivity."

Notwithstanding this state of the law, plaintiff argues that defendant should not be permitted to "urge that they are in a position of believing that they were not infringing plaintiff's rights throughout the years." The difficulty that the Court has with the plaintiff's argument is that the authorities seem to say that after six years without any notice or claim of infringement by a plaintiff, a defendant may presume that he is not infringing plaintiff's rights. A presumption of harm or injury to the defendant after such time certainly exists and a necessary corollary to such presumption is defendants' presumption that they were not infringers.

In this case, as has heretofore been indicated, the Court is very concerned with the length of the delay. It is one thing to excuse the delay in commencing a law suit on the ground that a Receiver in bankruptcy has to clear title to a patent before commencing a suit on such patent. But it is another thing to say that such problems prevented the Receiver from giving notice to the defendants of his intention to enforce his rights under the patent when he had perfected his title thereto. No valid reason has been offered by the

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plaintiff as to why he did not give any such notice during the entire 11-1/2 year period.

Under the circumstances, the Court feels that it must vacate that portion of its prior decision which denied defendants motion to dismiss the complaint herein on the ground of laches and estoppel and grant such motion.

In order that the record will be clear, the Court will now, therefore, grant defendants motion to dismiss the complaint herein in its entirety and it is hereby

SO ORDERED.

Thom C. Pitt

U.S.D.J.

FPI—SS—3-17-72—30M—9153

ORDER DISMISSING COMPLAINT

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP.,

Plaintiff,

-against-

CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN,

Defendants.

JUDGMENT

74-C-467

A Memorandum and Order of the Honorable Thomas C. Platt, United States District Judge, having been filed on January 9, 1975, vacating that portion of its prior decision which denied defendants motion to dismiss the complaint and granting the defendants motion to dismiss the complaint in its entirety, it is

ORDERED and ADJUDGED that the plaintiff take nothing and the complaint is dismissed.

Dated: Brooklyn, New York
January 10, 1975

Lewis Orgel
Clerk

AFFIDAVIT OF EUGENE M. BEREZIN
IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

JA124

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP., Plaintiff, v. CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN, Defendants.	Civil Action No. 74 C 467 BEFORE JUDGE PLATT

AFFIDAVIT

Eugene M. Berezin, being duly sworn, deposes and says:

1. I was formerly President of Pyramid Gold Products Corp. and the purchaser of the assets of Permadent Products Corp., the Plaintiff herein.

2. I have been engaged in the manufacture of porcelain and gold for dental constructions for about 15 years and was engaged in the processing and sale of gold for dental products for a period of 35 years.

3. During the period from 1959-1960 I was actively engaged in attempting to rearrange financing for Permadent Products Corp. and for the marketing of its products under its fused porcelain-to-metal dental processes.

4. Upon information and belief, the former employees of Permadent Products Corp., Defendants herein, left the employ of the Permadent Products Corp. in or about 1959 and thereafter commenced a similar type of business under the name Ceramco, Inc.

5. Ceramco, Inc. directly competed with Permadent Products Corp., and due to Ceramco's initial financial difficulties they sought assistance for financing from two precious metal manufacturers, Aderer, Inc. and Jelenko. Upon information and belief, it was known to the principals of Aderer and Jelenko that the principals of Ceramco had been the former employees of Permadent Products Corp. Further, upon information and belief, Aderer and Jelenko were aware that Receivership was in the process of being organized to protect the assets of Permadent Products Corp., and which assets included their patent rights, and Jelenko and Aderer, in order to protect their position instructed that joint sales with Ceramco involving fused porcelain-to-metal constructions include as a royalty payment due Permadent, $5.00-$10.00 per troy ounce of gold in order to protect Jelenko and Aderer against future claims of the Receiver of the assets of Permadent Products Corp.

6. Your deponent had for years been actively concerned about the use of the fused porcelain-to-metal process in the industry, and in the course of my business dealings as a dental gold manufacturer, I came to learn of the above arrangement through my discussions with various and numerous business contacts.

Sworn and subscribed before me
this 16th day of January 1975

Eugene M. Berezin

Notary Public

MOLLIE HARTMAN
NOTARY PUBLIC, State of New York
No. 0. 4570110
Qualified in Bronx County
Commission Expires March 30, 197

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF NEW YORK

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP., Plaintiff, v. CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN, Defendants.	Civil Action No. 74 C 467 BEFORE JUDGE PLATT

AFFIDAVIT

H. Gordon Pelton, being duly sworn, deposes and says:

1. I am the H. Gordon Pelton who is one of the individual Defendants in the above identified Civil Action and I am also the President of Ceramco, Inc., the Corporate Defendant in the above identified Civil Action. I am one of the founders of Ceramco, Inc., and I have been President since its inception in 1959.

2. I have read the Affidavit of Eugene M. Berezin, (sworn to on January 16, 1975 attached to Plaintiff's Motion Under Rule 59[e]) and I disagree with it.

3. I do not remember ever meeting Eugene M. Berezin, and I know that he has no personal knowledge of any facts about Ceramco's arrangementw with Aderer and Jelenko, and most of what he says is not true.

4. The facts are that Aderer and Jelenko did not finance Ceramco. Rather Ceramco licensed Aderer to use its trademark

"Ceramco" and "Ceramalloy" and the name "Ceramco Gold" in connection with gold to be prepared and sold by Aderer in such form as to be suited for effective unification with porcelain made by Ceramco. For use of these trademarks Aderer agreed to pay Ceramco Five Dollars ($5.00) per ounce royalty on all Ceramco gold which it sold. This royalty payment was made to Ceramco and there is nothing said in the agreement nor was there anything said in the negotiations leading up to the agreement about any royalty payment to Permadent as alleged by Eugene M. Berezin. Nor did Ceramco set aside any such royalty payment as a reserve.

5. Shortly after the date of the Ceramco-Aderer agreement, Aderer sublicensed Jelenko to act as a manufacturer, processor and distributor of CERAMCO GOLD. These arrangments with Aderer and Jelenko were entered into in 1959 before any patent actually issued to Permadent Products Corp., and at a time when I and others at Ceramco were completely unaware that Permadent had even applied for any patents, and were convinced that no valid patents could be issued on any subject matter we were using.

6. If the Berezin Affidavit is alleging that Jelenko and Aderer set aside Five Dollars ($5.00) per ounce of gold as a royalty payment due Permadent, I have no knowledge of any such action ever having been taken by Jelenko or Aderer, and no such arrangement was ever discussed in my presence, and I have no reason to believe that it was ever done.

H. Gordon Pelton

H. Gordon Pelton

Sworn and subscribed before me
this 28th day of January, 1975.

John H. Leatherman

Notary Public

Seal

JOHN H. LEATHERMAN, Notary Public
State of New York, No. 03-2233700
Qualified in Bronx County
Cert. Filed in N.Y. Co and Queens Co.
Commission Expires March 30, 1975

My commission expires: March 30, 1975

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF NEW YORK

BRIAN S. JONES, as Receiver for PERMADENT PRODUCTS CORP., Plaintiff, v. CERAMCO, INC., a Corporation of the State of New York; H. GORDON PELTON, IRVING KLAUS, JOHN H. LEATHERMAN, NORMAN LEVINE and LEON L. COHEN, Defendants.	CIVIL ACTION NO. 74 C. 467 NOTICE OF APPEAL

Notice is hereby given that Brian S. Jones, Receiver, plaintiff above named, hereby appeals to the United States Court of Appeals for the Second Circuit from the Order of January 7, 1974, granting Defendants' motion to dismiss Plaintiff's first and second cuases of action of its complaint.

Peter L. Berger

Attorney for Plaintiff
535 Fifth Avenue
New York, New York 10017
Tel. (212) 697-8520

AFFIDAVIT OF LENORE K. WEINSTEIN, SIGMUND KATZ AND ABRAHAM B. WEINSTEIN

JA129

Administratrix of the Estate of
Morris Weinstein, deceased

OATH

Being duly sworn, we LENORE K. WEINSTEIN, administratrix of the estate of Morris Weinstein, deceased, late a citizen of the United States and resident of Stamford, State of Connecticut, County of Fairfield (as by reference to the duly certified copy of letters of administration recorded in the U. S. Patent Office on April 14, 1953 in Liber 0235, Page 368, will more fully appear), SIGMUND KATZ, and ABRAHAM B. WEINSTEIN, depose and say that we are all citizens of the United States, residing respectively in Stamford, Connecticut, County of Fairfield; West Orange, New Jersey, County of Essex; and Stamford, Connecticut, County of Fairfield; that we have read the foregoing specification and claims and we verily believe that Morris Weinstein, Sigmund Katz and Abraham B. Weinstein are the original, first and joint inventors of the invention or discovery in FUSED PORCELAIN - TO - METAL TEETH described and claimed therein; that we do not know and do not believe that this invention was ever known or used before our invention or discovery thereof, or patented or described in any printed publication in any country before our invention or discovery thereof, or more than one year prior to this application*, or in public use or on sale in the United States for more than one year prior to this application*; that this invention or discovery has not been patented in any country foreign to the United States on an application filed by us or our legal representatives or assigns more than twelve months before this application*; and that no application for patent on thisinvention or discovery has been filed by us or our representatives or assigns in any country foreign to the United States.

as to subject matter continued from
pending applications Serial No.
, filed April 14, 1953, Serial No.
, filed January 4, 1955 and as to
additional subject matter more than
prior to said filing dates.

Administratrix of the Estate of
Morris Weinstein, deceased

STATE OF NEW YORK)
) ss:
COUNTY OF NEW YORK)

Before me personally appeared LENORE K. WEINSTEIN, ABRAHAM B. WEINSTEIN, and SIGMUND KATZ to me known to be the persons described in the above application for patent, who signed the foregoing instrument in my presence, and made oath before me to the allegations set forth therein as being under oath, this 13th day of October, 1959.

Molly Henry
Notary Public

MOLLY HENRY
Commissioner of Deeds, City of New York
N Y Co Clk's No 33, Reg No 1 H 19
Bronx Co Clk's No [illegible], Reg No 61-H 14
Commission Expires July 21, 1961

(SEAL)

LETTER DATED MARCH 12, 1975 MORGAN, FINNEGAN, DURHAM & PINE TO PETER L. BERGER WITH ACKNOWLEDGMENT THEREON OF PETER L. BERGER

JA131

MORGAN, FINNEGAN, DURHAM & PINE

ATTORNEYS AT LAW

345 PARK AVENUE

NEW YORK, NEW YORK 10022

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JOHN C. VASSIL
ALFRED P. EWERT
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HARRY C. MARCUS
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GEORGE P. HOARE, JR.
JAMES P. WELCH
THOMAS M. GIBSON
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COUNSEL
RALPH M. WATSON

March 12, 1975

Peter L. Berger, Esq.
Rubens & Berger
535 Fifth Avenue
New York, New York 10017

Brian S. Jones, as Receiver for Permadent Products Corp. v. Ceramco, Inc., a Corporation of the State of New York; H. Gordon Pelton, Irving Klaus, John H. Leatherman, Norman Levine and Leon L. Cohen C.A. No. 74 C 467

Dear Mr. Berger:

As agreed, we are submitting this letter to make of record your telephone conference with Judge Platt's law clerk, Mr. Thayer, prior to Judge Platt's decision and order dated January 7, 1975 on our motion for reconsideration by which he dismissed plaintiff's Complaint in its entirety.

We understand, and you confirm, that the telephone call was made to you by Mr. Thayer and that he posed the question to you as to whether plaintiff had ever given defendants, Ceramco, Inc. et al, any formal notice of infringement. Your response to Mr. Thayer was that plaintiff had never given defendant any formal notice of infringement prior to the institution of this lawsuit.

If the foregoing description of what transpired during the telephone conversation between Mr. Thayer and you is accurate, please sign and return the enclosed copy of this letter to us.

You understand that we shall not ask that this letter, or a copy thereof, be included as part of the record to be transmitted to the Court of Appeals, but that we may, if we deem it appropriate, annex a copy of it to our brief to be filed with the Court of Appeals.

Very truly yours,

John C. Vassil

John C. Vassil
Attorney for Defendants,
Ceramco et al

JCV/ed

Acknowledged & accepted

Peter L Berger

PETER L BERGER
Attorney for Plaintiff,
Brian S Jones, Receiver for
Ceramalloy Products Corp.

Dated 3/17/75

A 202 Affidavit of Personal Service of Papers — LUTZ APPELLATE PRINTERS

UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

BRUCE S. JONES, etc., Appellant, against CERAMCO, INC., etal., Appellees.	Index No. Affidavit of Personal Service

STATE OF NEW YORK, COUNTY OF NEW YORK ss.:

I, Victor Ortega, being duly sworn deposes and says that deponent is not a party to the action, is over 18 years of age and resides at 1027 Avenue St. John, Bronx, New York

That on the ~~2nd~~ 17th day of April 1975 ~~1974~~ at 345 Park Ave, New York, N.Y.

deponent served the annexed ~~Brief~~ Appendix upon

MORGAN FINNEGAN DURHAM & PINE

the Attorneys in this action by delivering a true copy thereof to said individual personally. Deponent knew the person so served to be the person mentioned and described in said papers as the Attorney(s) herein,

Sworn to before me, this ~~2nd~~ 17th day of April 1975 ~~1974~~

Victor Ortega
Print name beneath signature

VICTOR ORTEGA

Robert T. Brin

ROBERT T. BRIN
NOTARY PUBLIC, State of New York
No. 31-0418950
Qualified in New York County
Commission Expires March 30, 1977